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**AN INVESTIGATION OF CONTRACTUAL ARRANGEMENTS
WITHIN THE FIRM:
THE “VERTICAL INTEGRATION-FRANCHISING” MIX**

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SUMMARY

This thesis analyses the adoption of a mix of franchised and company-owned outlets among firms, namely, contractual heterogeneity within the firm.

Contractual heterogeneity is explained by the existing literature as due to heterogeneous characteristics of the downstream outlets of a company. Such correspondence, however, is arguably at variance with reality. Furthermore, this literature has not been able to provide an answer to contractual heterogeneity in the presence of downstream homogeneity.

This study contributes to the subject by proposing one such answer. The investigation is presented in two main parts. The first part provides a theoretical analysis of the problem and sets out a model representing the explanation proposed. The second part consists of an empirical investigation of the hypotheses set out in the first part. This empirical investigation is based on data collected by means of a survey of UK firms conducted specifically for the purpose of this study. The empirical analysis is performed by means of both a qualitative and an econometric study.

The explanation uncovered by our theory, supported by our empirical results, shows that under certain conditions contract mixing represents a separating equilibrium which enables the company upstream (principal) to overcome problems related to hidden action, hidden information and uncertainty downstream. Under certain circumstances such organisational structure represents the 'optimal choice' for the principal in the trade-off between incentives and risk sharing. At the same time, it proves to be optimal for the heterogeneous agents (downstream) by providing them with their maximum level of expected utility. To the best of our knowledge this is the first study that investigates both sides of this agency relationship.

In other words, this study demonstrates that the choice of a 'mixed' organisational form can be driven by efficiency reasons rather than competition reducing targets by the firm.

INTRODUCTION

"What is a firm?" Different answers in the literature have been given to this question all sharing the idea that, according to an optimisation criterion, a firm is a unit capable of producing, or selling, more efficiently than its constituent parts can do separately. According to Coase (1937), an economic organisation can take one of two general forms, markets and firms. This idea that the borders of the firm are so neat leads to a sharp distinction between those transactions that take place among firms and those that take place within firms. The gains arising from trade lead to market exchanges, but the presence of transaction costs induces firms to internalise these exchanges (Williamson, 1975).

The work of Coase (1937), Williamson (1975), and Klein, Crawford and Alchian (1978), emphasises that transaction costs are large and pervasive in reality. As a consequence, the parties cannot write a contract which takes into consideration all the different states of the world and all the events that can occur in these different states; rather contracts will be incomplete. "Incompleteness of contracts opens the door to a theory of ownership," (Hart, 1993). The theory of residual rights of control is basically related to the notion of ownership. This idea of a strict relation between ownership and residual rights of control is the basis of a theory of integration developed in Grossman and Hart (1986). In fact, this paper argues that in a world of incomplete contracts there is an optimal allocation of residual rights of control; to the extent that

ownership comes commensurate with residual rights of control, there is an optimal allocation of asset ownership.

Time, and theory, have passed since Williamson (1975) regarded the firm as an alternative choice between markets and hierarchies. The recent approach to the firm, and Williamson (1985) with it, on the contrary, depicts the firm as an organisation which lies somewhere in a continuum spectrum of possible contractual arrangements between the two extremes set by market and hierarchy.

Firms' organisational structures, we argue in this study, are mainly determined by their capability to adapt to new -both internal and external- constraints.

Recent theory in the economics of organisations, in fact, has been studying the firm as a nexus of contractual arrangements among the parts that constitute it. The driving factor behind the contractual packages that regulate these relationships are generally identified by this theory in the agency relationship. Such is the case of creating incentive compatibility in order to avoid monitoring problems (inter alia, Jensen and Meckling, 1976), and such is the case of a contract mix of franchising and vertical integration, on which this study is going to focus.

Contract heterogeneity within the firm confirms that such a sharp distinction between firm and market does not exist in reality. On the contrary, some hybrid types of organisations exist which incorporate elements of both organisational forms. The first kind of intermediate case analysed in the literature is that of sharecropping (Cheung, 1969). Moreover, according to an approach pioneered by Rubin (1978) and

Mathewson and Winters (1985), franchising can be seen as a hybrid form of such economic organisation.

In the first part of this work we will analyse the main themes of the theoretical literature on share contracts, on franchising, and on 'contract mix'. The basic framework of these theories is an upstream manufacturer, who derives monopoly power from a trade name. This firm can operate company-owned outlets, or it can sell the right to use its trade name and market its products to an independent retailer through franchising. Vertical restraints are analysed in this literature as a response to principal-agent problems. "A standard paradigm in this literature has an upstream firm selling its output to a self-interested downstream agent for transformation and resale to customers. In the absence of contractual restraints, the agent's choices of retail price and quality-enhancing effort generally will not be in the best interest of the upstream principal. The purpose of the contract is to induce the downstream firm to take actions that maximise the profit of the upstream firm," (Shepard 1993, p.58).

Designing the optimal (value-maximising) organisational form for a given company is a difficult theoretical question. In the case of a retailing chain, for example, the company must not only decide between vertical integration and vertical separation - delegation- of its outlets, but also what is the optimal contract in each case. Such a decision is expensive to the company because of costly contracting. The existence of costs of structuring, monitoring and enforcing a set of contracts among agents with conflicting interests, in this instance, highlights again the role of agency problems in shaping the structure of organisation, emphasised by many authors. For example,

Brickley and Dark (1987) remark, "the costs associated with various types of agency problems is seen as a major determinant of organisational form," (Brickley and Dark, 1987, p.402).

The economic literature on general agency issues is very broad. The more formal branch aims to analyse the nature of sharing contracts in the presence of some stochastic elements such as, for example, in the demand or in the cost structure of the firm. The other branch of this literature mainly tries to explain the separation of ownership and control within firms, focusing on observed contracts and practices (Alchian and Demsetz, 1972). This work analyses and makes use of the results of both of these branches of the theory.

Despite the vastness of the literature on 'the organisation of the firm', no answer has been provided to the existence of 'partially-integrated' firms, where vertical integration is mixed with share (franchise) contracts. Many researchers have recently turned their interest into trying to explain why firms adopt such hybrid organisational structure. All of them, however, mostly perform empirical analyses that show the relevance of some specific factor (i.e., monitoring costs, moral hazard, transaction costs, etc.) but fail to explain why such a contractual mixture exists. In fact, the general conclusions of these works fail to provide an answer consistent with the empirical observation. In the literature overview presented in this study we are going to describe these models and show their fallacies in explaining the phenomenon under investigation. Actually, as Lafontaine (1992) remarks, almost "all theoretical models themselves do not really address the issue of the contract mixing but rather

concentrate on the determinants of the share parameters," (Lafontaine, 1992, p.264).

This theoretical puzzle gains momentum in the light of the increasing adoption of heterogeneous contractual arrangements within the firm¹.

We intend to suggest, and will try to prove with this study, that heterogeneous contractual arrangements, and the observed increasing adoption of franchising, can be explained by their capability to bring the interests of the manufacturer and the dealer into closer alignment. In other words, we intend to show that 'incentive compatibility', and the capability to elicit the right human capital, make this organisational form the best choice for both the principal upstream and the agent downstream.

Holmstrom and Milgrom (1994), investigate the firm as an incentive system. In this study they observe that despite the large attention devoted by recent economic theory to the 'make or buy decision', no unitary framework of investigation has resulted. More specifically, the firm's decision these authors investigate consists of whether to obtain an intermediate input from an agent who is part of the firm (employee), who works under the employer's rules, and direction, by means of the employer's tools, in exchange for a fixed wage, or, instead, to make use of an independent, external agent who is contracted for producing this intermediate input with his own tools, and rules,

¹According to Lafontaine and Shaw (1996), in 1994 the estimates of franchising sales activity represented about 35 per cent of the entire US retail sales (see also Dicke, 1993). Furthermore, as reported by Dant (1995), the franchise option is not only considered by new companies entering the market, but also by well established firms (IBM, or Kodak, for example, have been actively examining the franchise option).

and is paid on the basis of his supply. Holmstrom and Milgrom, analogous to what we suggested above, argue that most studies on this topic have focused on only one specific aspect of this relationship. Among those, for example, Coase (1937) underlines the decision-making power of the employer in determining the employee's activities; Klein et al. (1978), Williamson (1985) and Grossman and Hart (1986) emphasise the role of assets ownership; while Alchian and Demsetz (1972) and Holmstrom (1982), together with many other scholars, highlight the agency characteristics of this relationship by focusing on its monitoring and compensation aspects.

In their paper Holmstrom and Milgrom (1994) explain what they believe the above authors, and theories, have completely omitted in their analyses, namely, how different incentive choices are intertwined. In other words, they investigate whether a co-ordinated use of (i) performance related pay, (ii) assets ownership, and (iii) direct control on the worker, can explain their covariation. These authors state that in order to explore the issue one has to ask “what explains the choice between different incentive systems: why are some workers employees and other workers independent contractors?” (p.973). The answer this paper provides to the question makes use of a multitask principal-agent model previously developed by the same authors (Holstrom and Milgrom, 1991). Within that framework of analysis, their answer relies upon introducing exogenous parameters that determine the system solution, e.g., variations in the costs of measuring performance, assets specificity, uncertainty about future. More specifically, this answer is provided by the determination of the exogenous

parameters that lead to co-movements in the incentive systems investigated. In other words, what we described above as the capability of the firm to adapt to different constraints, which cannot be exclusively identified in the impossibility to write 'complete contracts' (i.e., transaction costs).

The theoretical analysis developed by Holstrom and Milgrom compares favourably with some empirical results obtained by Anderson and Schmittlein (1984) and Anderson (1985). In these two studies the authors investigate whether the transaction cost hypothesis can explain why industrial selling is sometimes carried out by in-house employees, and some other times by independent sales representatives, while often the two systems are both adopted at the same time. Their results, consistent with Holstrom and Milgrom's findings, show that the most important variables in explaining the choice between outsourcing and internal production are the "difficulty of evaluating performance" and "the importance of non-selling activities", while the variables adopted to measure the transaction costs as described by Williamson (1985) all prove less significant².

Furthermore, Holstrom and Milgrom report that their results are supported, even though less directly, by empirical findings by Shepard (1993) and Slade (1996) who

² Empirical evidence on the 'transaction cost' hypothesis is reported by Lyons (1994). The findings of this study, however, do not extend to our case as they apply to subcontracting in manufacturing, where the production technology involves large sunk investments in specialised capital equipment, which is not generally the case in the retailing sector. Indeed, Lyons (1994) finds that subcontractors are more likely to have a formal contract if the share of output going to their most important customer is large, if the output is specialised, and particularly, if they are using a specific technology. In the case analysed by our study, both output and technology are standardised.

analyse ‘hard to monitor’ extra-services in gasoline retailing markets. However, when compared with the case of franchising, these results are not always consistent with the predictions of the theory. Their compatibility is limited to the extent of recognising the presence of a strong correlation between incentives for enhancing the market value of the outlet and the incentives for immediate sales, while they contrast on other important predictions. More specifically, Holmstrom and Milgrom find that the probability of in-house production is positively related to ‘monitoring difficulties’. Conversely, empirical finding⁵ on franchising (Brickley and Dark, 1987), show that the above relationship is negative in that the probability of delegation of the outlet downstream to an independent agent, i.e., franchising, is increasing with the difficulty of monitoring the outlet downstream. This main contrast is explained by the authors as due to the basic differences between franchising and industrial selling. In fact, they argue, this comparison “leads to an important lesson: it is essential to tailor agency models to the empirical context they intend to illuminate,” (Holmstrom and Milgrom, 1994, p.988). Indeed, as they point out, the fact that contracting out and employment are relationships characterised by a series of specific attributes, “ranks as one of the most significant regularities to be explained by a theory of the firm,” (ibid.).

In this work we set this target for a case of ‘vertical integration-delegation’ mix, when this results in the contemporaneous adoption of franchising and company-ownership (management) contracts. We pursue this avenue in a way that differs from the standard literature approach to the topic in several ways. Among these, most important, we point out that theoretical and empirical research on firms’

organisational decisions has always focused its main attention on the principal's choice, and its constraints deriving from the need to provide incentives to the agents. In this study we adopt a different approach. After characterising our agency framework as deriving from the characteristics of the specific case analysed, as suggested by Holmstrom and Milgrom (1994), we look at it from different perspectives. First, following the standard approach, we look at it from the firm's perspective within the framework of the theory of the firm and of organisational (namely contractual) choice. Then we change perspective, and look at this relationship from the point of view of the agents. In so doing, we make use of those theories in the labour economics literature that fit the context of this relationship (i.e., workers' selection models and managers' compensation design models). Last, to link these two different perspectives, we look at some research carried out on 'entrepreneurship', which can shed some light on the agents' contractual choice, and the decision between being a fully insured agent (manager) or a 'semi-independent' agent (franchisee), and show how these choices of the agents downstream affect (and to a large extent determine) the choices of the principal upstream.

As remarked above, although there has been growing interest in contract theory, which has resulted in a large increase in empirical research on heterogeneous contractual arrangements³ no definite answer has resulted from it. Furthermore, this is often flawed by the fact that lack of data on single contracts leads these works to adopt

³ See Lyons (1996) for a thorough review of empirical studies on inter-firm contracts.

some kind of general information at company level or even at industry level. We believe that a proper investigation on contractual agreements within the firm cannot abstract from contract-specific data. This study represents an attempt along this way.

The structure of this work is as follows: in the first chapter, after a description of the characteristics of the franchise contract, we present an overview of the relevant theoretical and empirical literature on 'contract-mix'. In chapter two, then, we attempt to model the basic rationale that, we believe, could explain why manufacturers delegate part of the ownership of the outlets of their retailing network. We follow this route mainly by looking at how firms select managerial compensation schemes. Franchising, indeed, "can be viewed as near one extreme of the managerial compensation continuum, i.e., compensation is incentive-based, versus some mix of salary and incentive compensation for the managers of centrally owned units," (Brickley and Dark, 1987, p.402).

This first theoretical part, is then followed by a second part which focuses on empirical analysis. It presents an empirical investigation we performed in order to test the literature's established theories versus the theory proposed by this study. This empirical investigation proceeds in three steps:

1. Survey: Qualitative Analysis
2. Econometrics of survey data
3. Econometrics of 'Franchise World Directory' data.

We then gather the treads of the theoretical and empirical results, and illustrate the

conclusions that can be drawn from our research.

PART I: THE THEORY

1. The Literature on Contract Mixing

1.1. Introduction

In this chapter we review the main theoretical and empirical models which have been developed to explain the coexistence of vertical integration and vertical separation patterns, namely, a mixture of different organisational forms, within the same firm. First, we look at the nature of the franchise contract, which is the typical form of vertical separation usually combined with vertical integration, i.e., company ownership. After that, we analyse the different explanations which have been given to this phenomenon by the existing literature. In particular, we look at agency, transaction costs, strategic motives, asymmetric information, (moral hazard and signalling), and uncertainty (risk sharing, capital market imperfection, locational factors and monitoring costs).

In chapter two we develop at greater length these factors jointly with some others which have not received much attention by the established literature.

1.2. *Incomplete Contracts and the Nature of the Franchise Contract*

Among the different contracts usually mixed with company ownership, many authors have reported that an increasing majority consists of franchising contracts. This is particularly so as the franchising contract can represent an efficient form of 'incentive contract' which minimises agency costs⁴. In fact, not only does it provide an incentive for hard-work to franchisees, but it also transmits part of the profits from the franchisees to the franchisors via the franchise fee and the royalties.

There are two different types of franchise arrangements, 'Traditional Franchising', and 'Business Format Franchising'. As reported by Kaufmann and Lafontaine (1994), the US Department of Commerce classifies franchises according to the main component of the transaction. 'Product and Tradename Franchising' (or 'Traditional' Franchising), involves franchised dealers who "concentrate on a company's product line and to some extent identify their business with that company. This type of

⁴ The word 'franchising' comes from the French word 'franchir', that is, to share.

franchising is limited to car-dealership, soft-drink bottlers and gasoline service stations. In 'Business Format Franchising', the franchise relationship includes not only the product, service and trademark, but the entire business concept itself -a marketing strategy and plan, operating manuals and standards, quality control, and a continuing process of assistance and guidance. Examples include restaurants, business and employment services, and real estate agencies, etc.," (Kaufmann and Lafontaine, 1994, p.417). In our study we use franchising to refer to the latter.

The main characteristic of the franchise organisation is the presence of market-like and firm-like links.

"A franchise agreement is defined as a contractual arrangement between two independent firms, whereby the franchisee pays the franchisor for the right to sell the franchisor's products and/or the right to use his trademark at a given place and for a certain period of time."

(Brickley and Dark, 1987, p.402).

The franchisor is a company that has developed some product or service to sell; the franchisee is a firm which is set up to market this product or service at a particular site. The franchisee runs the business in a manner stipulated by the franchisor, who may provide him with some sort of managerial assistance. Moreover, franchise contracts involve the payment from the franchisee to the franchisor of a proportion of the total franchise profits by means of either a royalty rate or a lump sum franchise-fee or both.

The main explanations provided by the existing literature on the use of incentive

contracts such as franchising, and associated vertical integration patterns (namely PVI), rest on the following topics: transaction costs (Klein, Crawford and Alchian, 1978; Williamson, 1985) risk sharing (Martin, 1988), moral hazard (Fama and Jensen, 1983; Mathewson and Winters, 1985; Brickley and Dark, 1987), capital market imperfection (Rubin, 1978) and locational factors. In the following sections we are going to present an overview of the main hypotheses formulated by these theories and to illustrate their limits in providing an explanation to the contractual heterogeneity, i.e. to the mix of franchise contracts with vertical integration.

1.3. Franchise Contracts in a 'Transaction Costs' and 'Agency' Framework

According to Coase (1937), transaction, co-ordination and contracting costs are key variables which explain the extent of vertical integration.

Klein, Crawford and Alchian (1978), elaborating on Williamson (1975), point out that the cost of using the market has to be increased by the possibility of post-contractual opportunistic behaviour. After a specific investment is made, quasi-rents are created, which give rise to the threat of opportunistic behaviour. These authors state that as assets become more specific, appropriable quasi-rents increase the cost of using the market (i.e., of contracts) more than the costs of vertical integration. After

examining different cases in the light of this argument, however, Klein, Crawford and Alchian (1978), conclude: “we have little idea why one solution appears to have been efficient for one project and another solution for another project. This merely indicates that as we move towards more complex ownership relationships, the problem of efficiently structuring the economic relationship, either within the firm or via contracts also becomes highly complex,” (p.325).

Klein (1980), develops on asset specificity and opportunism as described in his earlier work (Klein et al., 1978), by illustrating the franchise contract as an example of ‘unfair’ contractual arrangement due to its ‘bond-posting’, or ‘hostage-taking’ (Williamson, 1983), characteristics. Klein’s study highlights how transaction costs deriving from the adoption of incomplete contracts may explain some ‘unfair’ contractual provisions, “this is the case of having the agent to post a bond which is appropriated by the principal if he cheats,” (Klein, 1980, p.358)⁵. However, this ‘bond-posting’ feature of the franchise contract cannot, per se, be identified as an ‘unfair’ contractual arrangement⁶. This, we believe, and will try to show in the following chapters, is due to the fact that it rather represents a ‘human capital’ selection device which, at the same time is able to guarantee the agent’s good

⁵See also Klein and Murphy (1988) on how to motivate employees to perform along contractually unspecified elements of the relationship.

⁶Or a contractual arrangement adopted to suppress competition (Klein and Saft, 1985). Williamson (1983, 1985) underlines that the failure to recognise that the use of ‘hostages’ is due to the fact that they constitute ‘credible-commitment’ instruments, rather than unfair contractual practices, has led to repeated policy mistakes.

performance. If the franchisor were to cheat by appropriating this bond, we would expect such behaviour to result in the impossibility to recruit new franchisees.

Analogously, despite stressing the importance of transaction costs, Williamson (1985) suggests also that 'hostages' could have ex-ante screening properties. This last idea, however, has not been followed up in the literature. Conversely, we believe this is where the core explanation to contract heterogeneity lies. We will try to show that the self-selection properties attached to this contractual arrangement (bond), carry a much larger explanatory power than any 'transaction cost' interpretation of it. This is even more so if we consider the fact that the written contractual provisions covered by the franchise contract have been growing to such an extent that this can almost be identified as a 'complete' contract (Hadfield, 1990).

Kwon (1993), has proposed an explanation of the increasing adoption of hybrid organisational forms mainly based on transaction costs. As, he argues, large transaction costs can in some cases offset the advantages of the franchising contract, mixing franchising with vertical integration patterns is a way to enhance the franchising system efficiency giving rise to mixed organisational forms defined as Partial Vertical Integration (PVI).

Even though we recognise the importance of transaction costs in influencing the company's organisational choice, it is our opinion that the main explanation for the adoption of this PVI structure, as mentioned above, rests elsewhere. Our point is supported by the result of many interviews with franchisors and franchisees (see Kursh, 1968, Izraeli, 1972, Mendelsohn, 1979, Dnes, 1992). What generally resulted

from these interviews is that the franchising contract, in a sense, can be regarded as a kind of contract that minimises transaction costs. This comes from the fact that despite being an incomplete contract, the franchise contract is widely comprehensive as it takes into account almost all the contingencies that may arise within the contractual relationship⁷, in this way minimising the possibility of opportunistic behaviour from either party. Moreover, this argument is supported by the fact that an extremely low percentage of contract breaches has been observed within franchising systems (see Dnes, 1992a. We obtain analogous results in our empirical investigation reported in the second part of this study).

The use of a manufacturer's brand name by a retailer involves a number of potential agency problems.

"After a contract has been struck to provide for the retail distribution of a product, the retailer must make decisions on prices, sales effort, and any input (for example servicing) into the quality of the final product; the manufacturer continues to invest in (national) advertising, product quality and the product's brand name. In general, if all decisions could be completely specified in the contract, the efficient (joint profit-maximising) choices could be guaranteed. But costs of enforcing a complete contract, in particular the costs of monitoring the decisions of contractual parties, lead to an incomplete contract. In an incomplete contract, principal's or agent's decisions

⁷ Hadfield (1990), reports an overview of the features of the typical franchising contract and remarks the breadth of coverage as, she affirms, "the contract contains clauses pertaining to nearly every detail of operation," (Hadfield, 1990, p.943), which is increased yet further if we take into account the amount of rules contained in the franchisor operation manual.

unspecified in the contract will be undertaken ex post on the basis of the unconstrained self interest of the decision maker given the incentives provided by the contract; to the extent that this self interest deviates from the collective interest of all parties to the contract, an efficiency (agency) cost is incurred."

(Brickley and Dark, 1987, p.504)

The principal-agent problems that can arise in a retail contract come from the fact that the agent (retailer) may shirk on the quality of the input provided because he does not obtain all the benefits accruing from the increased quality. The manufacturer, on the other hand, may have less than a full incentive to maintain a strong brand name, or, may act opportunistically, taking advantage of the franchisee's sunk investment (Klein et al., 1978; Williamson, 1985). Therefore a double-side moral hazard problem may arise. Since there is a potential for such problems, some authors represent the franchise contract as an efficient organisational form which minimises agency costs, including monitoring costs. Actually if principal-agent problems are an important factor in the determination of the organisational form, they can have a large negative influence on the vertical integration decision. If there is geographical dispersion among the outlets so that monitoring costs are high, the franchise contract can be seen as a substitute for vertical integration. This is so because "it can not only give an incentive to hard-work by franchisees, but also transmit the profits of franchisees to the franchisor through the franchise fee, royalties, and the wholesale price mark-up. So franchising of all outlets may be the long-run equilibrium after expansion of a franchise system has been completed," (Kwon, 1993).

Vertical efficiency is, however, restricted by contractual constraints, Kwon suggests. If we consider, for example, the incomplete information concerning future demand and retail costs, then the contract should include risk sharing, which leads to an incentive problem. Moreover, if the franchisee has some bargaining power against the franchisor, contractual efficiency can be further limited and such factors as investments in outlet facilities, services provided, etc., cannot be perfectly observed, therefore they cannot be a basis for legal action.

As a consequence of this, the choice of a manufacturer to retain some outlets and franchise others, i.e., to revert to vertical integration only 'partially', can enhance the efficiency of the organisation for several reasons. By running some outlets, the manufacturer can acquire information which enable^s him to write an efficient contract. Additionally, if he retains high-demand outlets he can avoid the losses he would incur by dealing with a 'powerful' franchisee. Moreover, he may invest more or provide services more efficiently than a franchisee would do and so his outlets may increase competition among franchisees, if competition can be seen as yielding vertical efficiency.

In this study we are going to show that the above arguments are flawed in many respects, and that, despite the existence of these features, some of them are necessary but not sufficient to explain the adoption of heterogeneous contracts within the firm.

1.4. Strategic Motives for Vertical Separation

Although the main theories about these kinds of contracts emphasise the incentive aspects of separation by assessing the existence of traditional agency reasons for vertical separation, there has recently been some interest in strategic motives⁸.

Slade (1992), builds up a theoretical model in which only strategic motives can explain the choice of vertical separation. According to this model she identifies a first best contract, i.e., a contract which solves the agency problem, and the cases when manufacturers may benefit from delegating pricing authorities to retail outlets. Moreover, she finds empirical regularities in a gasoline retailing market consistent with this model of strategic vertical separation.

The idea underlying this paper is that "Vertical separation" ^{integration?} is often seen as a way of harmonising the interests between upstream and downstream firms (Coase, 1937). Vertical separation, in contrast, can harmonise the interests of competing manufacturers," (Slade, 1992, p.3). The background to this model is Schelling's (1956) idea that principals may benefit from delegating authority to agents. This idea has been formalised by Kurz (1977) who demonstrates that delegating to an agent the authority to play a game corresponds to a two stage game where players first choose their utility functions. In the first stage of this two-stage game, which comes from Rey

⁸ For example, Vickers (1985), Rey and Stiglitz (1985), Bonanno and Vickers (1988).

and Stiglitz (1985), manufacturers choose the terms of the contracts offered to the retailers, and, in the second stage, retailers play a game in prices. In particular, if "...two manufacturers play a game in prices, they could achieve the joint-profit-maximising outcome if each believed that the other would exactly match his price changes. However, in the Nash equilibrium of the static game, each has a zero conjecture and the outcome is inside the Pareto frontier," (ibid.). If, instead, we consider a two-stage game, involving the delegation of price authority, completely different results are obtained. Consider a first stage in which manufacturers choose a wholesale price at which they sell the product to retailers, who have to pay a fixed fee. Then, in the second stage, a game in retail prices is played if the retailers accept the contracts. In this framework, if the manufacturer increases the wholesale price, the retail price will rise as well. Moreover, if prices are strategic substitutes, prices of the rival retailers will rise. Therefore, the delegation of pricing authority may generate a certain degree of matching in prices, where this degree depends on the slopes of the stage-two reaction functions, on the size of the increase in the retail price due to the increase in the wholesale price and on the degree of substitutability between the two products, namely, the cross price elasticities of demand. In the precise formulation of this model, there are upstream duopolists who produce differentiated products at constant marginal costs. These manufacturers have the possibility to sell their product to consumers directly, or they can sell it to an exclusive dealer at a certain wholesale price. The first case is of vertical integration, the second, of vertical separation, which is modelled as a two-stage game. This model, however, relies on several strong assumptions which are not likely to hold in practice. Firstly, there is assumed to be no

uncertainty. This assumption is drastic and, as we will make clear later, not realistic. It implies that there are no agency problems such as moral hazard or risk aversion and, therefore, that there is no need for the manufacturer to insure the retailer. Secondly, Slade assumes contracts can be observed. Additionally, contracts cannot be renegotiated, each manufacturer has only one retailer, the contracts are linear and, finally, that the stage-two game is static.

Slade tests this model by studying the correlation between contract type and station characteristics in the retail gasoline market. While this work provides empirical support to strategic motives for vertical separation, she finds that none of the existing models can explain empirical regularities. However, even though she finds empirical evidence consistent with her theory, the predictions of her model cannot be considered universally valid because they rely on some assumptions which seldom hold in reality and which conflict with the incentive motive. That is, her model focuses on the fact that potential franchisees have no information about the prospective profitability of the franchise, while it neglects all the other problems which arise from the asymmetric information existing between the principal and the agent.

1.5. *Models Based on Information Asymmetries*

So far we have merely sketched the main factors that explain the choice of share

contracts, and in particular of the franchise contract, as being asymmetric information on either the agent's or the principal's side, which gives rise to moral hazard problems on the side of the principal (franchisor), and on the part of the agent (franchisee), risk, locational factors (and monitoring costs) and the franchisor's need for capital. We will now analyse each of them in more detail.

1.5.1. Signalling Models

Gallini and Lutz (1992) set up a model where franchisors have private information about the value of their franchise that they try to communicate to potential franchisees. Their explanation of the simultaneous existence of franchised and company owned outlets rests on the observation that franchisors often acquire private information, not available to franchisees, on product demand through their marketing efforts. Under this assumption of asymmetric information, they show that a franchisor makes use of both direct ownership as well as the franchise contract to convey information about a new product. The originality of this model rests on the fact that, in contrast with the alternative explanations advanced in the literature, the authors' explanation for the dual distribution relies neither on capital market imperfection (see below), nor upon location-specific factors. As they remark, although franchising is a thriving organisational form, the economic success of a franchise, especially of a new product, is not guaranteed. Therefore purchasers of new franchises operate in uncertain

markets, commit themselves to large sunk investments, and their profits depend on a complex relationship with the seller of the franchise. Although the potential franchisees may have access to the same marketing data as the franchisors, they are less able than the franchisors to identify whether a product's success is location-specific, is attributable to the efforts of the owner or is due to high demand. Therefore a franchisee will want some assurance that the franchise is profitable. Under this assumption of asymmetric information, they show that the franchisor will use two instruments to convey information about the new products: a dual distribution, that is, selling products through company-owned and franchised outlets, and a royalty in the franchise contract. Their analysis is based mainly on Leyland and Pyle's (1977) study of how an entrepreneur can signal high profitability of his product/project to potential shareholders by investing in the project himself, while he is not willing to invest his money in low value projects. In addition to predicting when a firm with private information will directly invest in the product (as in Leyland and Pyle), their model explains the specific form of that investment, i.e., direct investment in company ownership vs. share contracts with franchisees. That is, they analyse the trade-off among multiple instruments for signalling.

Moreover, their explanation does not rely either on the capital market constraint argument or upon the locational theory, and the predictions of the signalling model differ sharply from those of the two previous standard theories. Namely, the signalling explanation for dual distribution predicts that, over time, the proportion of company owned outlets falls as the franchisor's private information is revealed to prospective

franchisees.

Note, however, that this model does not provide a satisfactory explanation of the use of different kinds of organisation within a firm because it relies on only one aspect, i.e., the case of new products, which is not the principal aspect of the several problems that the asymmetric information argument presents in our analysis.

Lafontaine (1993) investigates whether signalling motives can explain franchising. In this paper she shows that franchisors who are just becoming involved in this contractual option, signal their type through the decision to operate outlets directly, and by means of their choice of the contract terms. This argument, though, would make sense only if this mixed-contractual choice were adopted by newly established firms, or firms that have just decided to enter franchise, this is not what is observed in reality where mature firms keep the ownership of part of their outlets. Second, Lafontaine's claim that royalty rates and franchise fees are used to signal to potential franchisees the value of a franchise, does not enjoy evidence from her data. This, she argues, suggests that there are other factors beside the signalling motive that influence both contract typology and contract terms choice of the company.

1.5.2. Moral Hazard Models

Brickley and Dark (1987) identify several agency problems associated with franchised and centrally-owned units. Companies involved in franchising usually have valuable brand names. Therefore they have to control the actions of the agents throughout the organisation to ensure the continued value of the trademark because both managers and franchisees may have no interest in spending excessive effort in maintaining the quality and the reputation of the product. The managers may shirk or/and take perquisites, while the franchisees may supply lower quality than required.

According to Fama and Jensen (1983 a, b), there can be two possible ways to control the behaviour of the agents in the firm. The first could be having monitoring systems that limit the discretion of the decision agents, and the second could consist in delegating the ownership of residual rights to the decision agents who will bear the wealth effects of their actions. But, on the one hand, companies with valuable brand names are not likely to give the residual rights to the decision makers of all the units since some central control is necessary to maintain the trademark value, while, on the other, centrally operating all the units may be very costly because building up a monitoring system to control the behaviour of the employees can be very costly, especially when all the outlets are dispersed on a wide geographic area. It follows that franchising can be seen as a hybrid between the two methods of controlling agency problems, that is, monitoring systems and residual ownership. In practice, even if the

franchisee is the residual claimant of his unit, he does not have full decision rights; the central company retains some decision rights plus the authority to monitor the franchisee for product quality and to terminate the contract in case this quality is not maintained. Free riding by the franchisee can be a problem when there is an incentive to supply lower-quality goods. This incentive is particularly strong when the probability of repeat sales to a customer is low. After receiving a low quality product, a customer is unlikely to return to the chain, thus hurting other franchisees and the value of the franchisor's trademark. Moreover a franchisee may have less than full incentive to advertise the product since some of the benefits of this advertising will go to other retailers.

There are, however, some trade-offs associated with the choice of the organisational form. The managers of the company-owned outlet receive fixed salaries while franchisees are residual claimants of the unit's profits. Therefore, while in the latter case, the franchisees will bear the costs and benefits of their actions, in the former case, managers will not bear such costs. As a consequence, managers may have an incentive to shirk and take perquisites.

Mathewson and Winter (1985) focus on the franchise contract and the potential agency problems that derive from it. They identify the same potential moral hazard problem: "The manufacturer upstream gains profits through a positive wholesale mark-up or revenue sharing as local demand increases (a vertical externality), and to the extent that the retailer's quality input adds to the national brand name of the product, both the manufacturer and other retailers benefit." But in a share contract,

such as the franchise, they argue, moral hazard problems can arise for both parties. "Similarly, the manufacturer has less than full incentive to maintain a strong brand name. If the set up costs of establishing the bulk of the manufacturer's retail distribution system have been sunk by retailers, then the existing retailers must be earning quasi rents (returns on the contract specific investments), which are maintained if the brand name is maintained. Retailers therefore share in the benefits of a strong brand name;" (Mathewson and Winter, 1985, p.504). In this model, the franchisor, or principal, creates a brand name for a single product through national advertising. He leases the exclusive right to produce and sell it to a franchisee, or agent, who adds additional quality to the product. There are two potential free-riding or externality features to this arrangement: firstly, the agent can free ride (vertically) on the national brand name; and secondly, with transient customers, any agent can free ride (horizontally) on the local quality of other agents. With national brand names created and leased by the principal, vertical externalities are always present⁹. The basic informational asymmetry that is central to this model is exactly the opposite of the one analysed by Gallini and Lutz (1992). The basic assumption of this model is that the local demand for the franchised product is uncertain. There can be two states of the world: state 1: low demand or 'bad times', and state 2: high demand or 'good times'. The uncertainty of success at any given retail site and the division of the costs of developing the business at any site between the principal and the agent seem to be

⁹ Horizontal externalities are sometimes invoked as the critical source of the franchise restrictions, (see Rubin, 1978).

central aspects of most conventional retail franchises. Sometimes, when the franchisee signs the contract, he does not yet know which retail site he will be assigned. In this model, the authors assume that the informational asymmetry concerns the fact that, after signing the contract and being assigned a territory, the agent costlessly observes the state of local demand before undertaking any further action. Hence the principal must rely on the agent's actions to obtain information on local demand. The contract specifies a payment scheme plus the quality of the input of the franchisee in each of the two states of demand and brand name investment. The franchisor will monitor the franchisee since there is the possibility of cheating which arises from the presence of both horizontal and vertical externalities. Since the franchisor cannot costlessly identify the realised state of demand, there is an incentive for the franchisee to declare the low level of demand when the 'good state' has occurred if doing so generates rents to him. If the output is correctly measured by the franchisor, the franchisee can cheat by reducing local quality to free ride on the national brand name and realise any possible rents which derive from misrepresenting the true state of demand. When there are rents which come from local quality but which cannot be appropriated by the local retailer because of transient consumers, each franchisee has an incentive to reduce the local quality to the level that yields output consistent with state-declaration. Hence in both cases, of vertical free riding and of horizontal free riding, the rents from cheating arise from saving on local quality, and, the larger the contractual level of local quality in the 'bad state', the greater the incentive to cheat.

Besides the possibility of cheating on the agent's side, there is the possibility of cheating on the principal's side as well, as we observed above. This possibility, for vertical free riding in the contract by the franchisor, comes from the fact that the amount of investment in the national brand name that the franchisor has to make does not need to be specified in the contract. This is so because, since contracts normally last for many years, there may be unforeseen events or contingencies which affect this level of investment, and therefore both parties may be better off if the principal has the possibility to set it in the light of such events. But the possibility to vary this level brings about an incentive for the franchisor to reduce it if he does not fully bear the costs of reducing the amount of investment because of the revenue-sharing arrangements. The last assumption of this model, then, is that there is noiseless monitoring of the local quality by the franchisor and its frequency is specified in the contract.

After setting out all these specifications, Mathewson and Winter proceed to ask which contract is the first best and why revenue-sharing contracts are used instead of the first best. The first best contract would elicit optimal local quality decisions and maximum rents for the franchisors. Such a contract would involve leasing the trademark to a local retailer for a lump-sum payment and establishing contractually a monitoring mechanism to detect cheating. But, as the authors show, an incomplete contract driven only by an asymmetry on the state of local demand between the franchisor and the franchisee is not sufficient for profit-sharing franchise contracts. They argue that with noiseless monitoring, some form of a binding wealth constraint for the franchisee is a

necessary and sufficient condition for a franchise contract. With a zero wealth constraint, the franchise contract must generate sufficient surplus in the 'bad state' for the franchisee to pay the royalty fee ex post. However, the profits accruing to the agent in the 'good state' are necessary to guarantee an incentive for the agent to reveal truthfully the occurrence of this state. Moreover, these profits must exceed the expected quasi-rents generated by the agent if he misdeclares the state. "Under such a scheme, the royalty fee payable to the principal in the optimal contract varies with the state of demand, that is, a revenue sharing scheme is in force. Rents accrue to the franchisee if the expected returns necessary to insure truthful transmission of the local demand states by the franchisee to the franchisor exceed the opportunity cost for the franchisee. In this case we may observe queues of potential franchisees," (Mathewson and Winter, 1985, p.511).

1.6. Risk Sharing Models

A central feature of the literature on alternative organisational forms is that among the different economic forces which determine which organisational form is optimal, "franchise operations are the result of forces that restrict residual risk bearing to important decision makers," (Norton, 1988, p.201).

Franchisees can be seen as owner- managers who bear the residual risks of a

local operation. Their income depends on the difference between the stochastic revenue inflows to the local operation and promised payments to other factors of production. According to Norton (1988), the risk-bearing of franchisees is different from that of other organisational forms in two respects. Firstly, in many economic organisations the management of the firm is separate from the risk-bearing function. Secondly, franchisees become last claimants after paying a franchise fee and a royalty rate, while some labour contracts make employees, especially managers, residual claimants in a different way (Lazear, 1981). The explicit payments make franchisees residual claimants to a higher degree than most employees; moreover, franchising may reflect the limits to bonding in employment contracts (Eaton and White, 1982).

Risk sharing was first proposed by Cheung (1969) to explain the existence of sharecropping, which can be seen as one of the earliest examples of incentive contracts. If we assume that both parties are risk averse, they both benefit from the insurance that comes from the use of a share contract. Martin (1988) puts forward a similar argument to explain the use of franchise contracts. He says that to exploit economies of scale in promoting products and in monitoring all the retailers, a large number of outlets at heterogeneous locations is needed.

"Different locations have different expected returns and different risk characteristics. Franchising allows the firm to exploit these economies of scale and at the same time to shed 'risky' locations and retain more profitable sites as company-owned outlets. The franchisor may choose to franchise risky locations as a consequence of simple risk aversion or, if the franchisor is risk neutral, because monitoring costs rise as risk

increases. A location with substantial variation in sales will require closer supervision as a company-owned outlet than a location with very little variation in sales. Hence higher risk may induce higher monitoring costs. The franchisor's ability to shift the risk to franchisees will be limited by franchisee's risk aversion and by the expected profitability of the sites. Franchisees will be willing to accept higher risk if they are rewarded appropriately with higher expected returns."

(Martin, 1988, p.954)

In this paper, Martin makes an empirical analysis of some basic hypotheses about why many firms rely on a mix of franchising and company-owned outlets for expansion. The results of his work lead him to conclude that franchising is not a temporary phase on the path to complete ownership integration. On the contrary it represents a long run market solution to monitoring and risk diversification problems. Martins' theory, however, is flawed in many respects, most important, as we will discuss below in deeper details, in its assumptions about the principal's and agent's attitude towards risk, and in the suggested way to allocate the risk between them.

According to Brickley and Dark (1987), one of the costs associated with franchising comes from the associated inefficient risk bearing. "If the manager of a franchised unit has a large proportion of his wealth and income tied to the performance of the unit, his investment portfolio will be relatively undiversified," (ibid., p.405). This inefficient risk bearing generates at least two types of agency costs. The first comes from the fact that the manager can make less than ideal investment decisions than an efficiently diversified decision maker. The second is due to the higher required rates of expected

compensation because of the increased risk.

While all the literature focusing on contractual relationships characterised by single-sided moral hazard find that the trade-off between risk sharing and efficient production are fundamental in determining optimal linear contracts, Bhattacharyya and Lafontaine (1995) show that the insurance motive does not need to be invoked at all to obtain revenue sharing and linearity of contracts. This result, however, is derived under specific assumptions on probability distributions, utility functions, and, most important, by assuming that the parties involved in the contractual relationship are both risk neutral. We rather tend to believe that a closer representation of the attitude towards risk of the two actors of this contractual arrangement would see the principal as being risk neutral and the agent risk-averse. This paper, however, concentrates the analysis on contract terms rather than on the existence of contract mixing.

1.7. *The Capital Market Imperfection Argument*

A common explanation for the franchising of independent firms, rather than reliance on expansion by wholly-owned subsidiaries, is that franchising is a method used by the franchisor to raise capital¹⁰. In fact, until Rubin (1978) exposed the flaw of this

¹⁰ "Franchisors create these systems because they have too little capital to consider a wholly-owned chain"; Caves and Murphy (1976). Also Oxenfeldt and Kelly (1969) argue that these firms are in franchising because they do not, or did not, have the necessary capital to expand through company-operated outlets.

argument, it was generally considered true that a company, facing a capital constraint, would have been able to raise capital through franchising at a lower cost than through other arrangements. This traditional explanation is fallacious in many ways. First of all, the idea of a franchisor using franchising only when he has not access to capital on his own implies that, as his company matures and gains access to capital, he should then transform the franchised outlet into a company-owned one; as a consequence we should observe a trend towards company operation. Such a trend has not been observed, on the contrary, as we will demonstrate in more detail in the empirical section of this work, the converse has been the case. Second, sometimes franchisors offer finance to their franchisees. Finally, the investment of the franchisee seems riskier than that of the franchisor because investing in a single outlet is much riskier than investing in a portfolio of shares of all the outlets in a chain. Therefore, if the franchisee is required to invest in only one or a few outlets, he will require a higher rate of return on his capital, thus inducing the franchisor to earn less. But, as Rubin (1978) has pointed out, this argument makes sense only if we assume that franchisors are more risk averse than franchisees, which is unlikely to be the case. Moreover, if this were the case, a franchisor could obtain cheaper capital by offering shares of all his outlets to his store managers. If we consider the existence of an incentive problem, however, this argument makes more sense; that is, if the retailers cannot fully appropriate the benefits coming from their efforts, they would be induced to expend a low level of effort. The store managers, knowing that, could ask for a higher rate of return than a franchisee would do. But, in such a case, the franchisor should opt for a contract like the first best contract of the Mathewson and Winter model i.e., a fixed

rent contract. However, the presence of incentive problems on the franchisor's side and the need to insure his franchisees lead to the use of a different contract, namely a sharing contract.

Nevertheless, Martin (1988) affirms that capital market imperfections, such as tight credit conditions with high real interest rates and credit rationing, can push a company to make use of the franchise contract but, he remarks, there are forces that push in different directions according to whether the franchisor is a mature or immature firm. If, for example, the franchisor is a mature firm and wants to acquire some outlets as franchised but cannot because of tight credit conditions, then he can retain these sites as company-owned, to avoid losing them, and at a later date, when credit conditions improve, he can franchise them. In the case when the franchisor is a young immature firm, in tight credit conditions he may have no access to national capital markets. Therefore, failure to adjust the ratio of company-owned outlets could involve the loss of attractive sites and thus imply a slower rate of growth. In such a case the franchisor would franchise the outlet and then recapture it as company-owned when the franchise contract expires. According to Martin's argument, however, credit market conditions seem to influence only the short-run mix of company-owned and franchised outlets, and not also the long-run.

1.8. Locational Factors and the Monitoring Costs Hypothesis

In discussing about the nature of the firm, Stigler (1968) outlines the concept of "functions" or "activities" of a firm. His explanation for vertical integration is mainly based on the notion that the different functions performed by a firm will reach their lowest cost level at different ^{scale} levels. Rubin (1978) puts forward this argument as a basis for a theory of firm expansion. Therefore, we can use this concept in the case of the franchising-vertical integration mix.

According to this idea, we would argue that the franchisor will tend to perform functions with costs which fall for a substantial level of output, while the franchisee will tend to undertake functions whose average cost curve reaches its minimum for a lower level of output. The main activity of the franchisee consists of the management operations of the business. Since the costs of this function quickly become large because of the problem of controlling local managers, it may pay to separate this function from the others directly operated by the firm and transfer it to a franchisee. Accordingly, Rubin (1978) suggests that physical dispersion is the relevant market parameter that makes conventional organisation form prohibitive. Obviously, the further is the operation from the monitor, say the branch headquarters, the higher the costs of monitoring local operations will be. Hence at a certain point, the monitoring costs associated with intra-firm specialisation will exceed the benefits. Essentially, "Franchising loses the efficiency of specialisation but also avoids the monitoring costs

because the local manager is now an investor whose wealth is strongly dependent on the performance of the local unit", (Norton, 1988, p.202). This argument also derives from the work of Alchian and Demsetz (1972) and of Jensen and Meckling (1976) on monitoring and control within the firm. According to these authors, franchising is usually undertaken when the franchisee is physically removed from the franchisor, and thus where monitoring of the performance and behaviour of the franchisee would be difficult. In such a situation it pays to devise control mechanisms which give the franchisee an incentive to be efficient, i.e., to avoid shirking and consumption of leisure. If such mechanisms can be set up, both parties would benefit. Consequently, if franchising is used because the behaviour of store managers is difficult to control, then it follows that when there is a high concentration of retailers in a certain area, this problem should be reduced by means of a supervisor who could monitor several stores together. However, when the outlets are geographically separated, such monitoring would be more expensive. But when a firm begins to operate, it is not likely to have many outlets in the same geographical area, and so only after some time, if it is successful, it can own many retailers in large urban areas since it is worth buying back the franchises.

Martin (1988) stresses the importance of this argument in the decision of retaining vs. franchising an outlet. "Hence," he says, "we may expect that remote locations will be franchised and that geographically concentrated locations will be retained as company-owned outlets." (Martin, 1988, p.955). Moreover, he adds, franchised outlets must also be monitored because, as we said above, franchisees have an incentive to

free ride against the quality choice of other franchisees. The need to monitor the franchisee's quality choice, however, declines as the proportion of repeat customers increases, since "...the market will monitor them when transient customers are rare" (ibid.). This reinforces the tendency to franchise outlets in more remote locations. Monitoring costs, in fact, are likely to be lower in urban than in rural areas because urban areas are more easily accessible, therefore travelling costs are reduced, and because of possible economies of scale when a firm has multiple units in a given area.

Furthermore, we have to consider other arguments related to the monitoring costs hypothesis. First, the variability of demand. When there is high variability of demand, the manufacturer must monitor more frequently the outlets to avoid the moral hazard problem reported above i.e., the franchisees' misrepresenting the state of the demand. Second, the level of local quality that must be added to the product. If the retailer is supposed to add a high degree of quality to the product, there is a higher risk of cheating, therefore the franchisor must make a greater effort to monitor the outlets.

According to a rather old argument (Alchian, 1950; Fama and Jensen, 1983), surviving firms will be organised in a manner that allows delivery of the product at the lowest price, while still covering costs. "An organisational form survives in an activity when the costs and benefits of its residual claims and approaches it provides in controlling agency problems combine with available production technology to allow the organisation to deliver products at lower prices than other organisational forms." (Fama and Jensen, 1983, p.333).

This suggests that when there is a large distance between the site of production and

the final market, the cost of transporting the products may be too high when compared with revenues, therefore the manufacturer has an incentive to establish a centre of production near to the final market. In this way, economies of scale may arise, especially if the firm has multiple outlets in that market.

Brickley and Dark (1986), however, demonstrate that the transport cost argument is no longer valid since agency costs play a major role in the choice of the organisational form.

We will explore these two contrasting arguments in our empirical research reported in the second part of this work.

1.9. *Empirical Works on Contract Mixing*

In this section we will briefly review the existing empirical literature concerning contractual forms and vertical separation. In particular, we will focus on the papers which examine manufacturers' decision to mix company-owned and franchised outlets¹¹.

¹¹In this section we present a short overview of the empirical research on 'contract mix' to complete the picture of the existing literature on the topic. A deeper analysis of this literature is presented in the empirical part of this work, where we highlight the hypotheses deriving from this literature, and compare and test them against the hypotheses proposed by this study.

The most part of empirical studies in this literature have examined the relationships among contractual forms and agent's choices by looking at vertical restraints as a response to principal-agent problems.

Brickley and Dark (1987), investigate the effects of monitoring costs and initial investment on the upstream firm's decision to operate downstream units as franchised rather than company-owned outlets. They find patterns consistent with franchising to economise on monitoring costs at remote outlets and with company ownership to minimise free riding on the reputation of the upstream firm. Hence, their empirical results support the notion that owning versus franchising reflects a trade-off among agency problems of the kind reported in the preceding sections of this study.

Analogously, Brickley, Dark and Weisbach (1991) report that, according to their results, franchising is a method of internalising the costs of shirking and perquisite-taking to the unit managers. Their analysis further suggests that the costs of franchising increase with the required per-unit investment due to inefficient risk bearing considerations. Moreover, in contrast with the traditional capital-constraint argument, they find that the likelihood of franchising decreases as per-unit capital requirements increase.

Norton (1988) performs empirical tests on the incidence of franchise contracts as an organisational form for three industries in the USA. His results suggest that both principal-agent incentives and informational incentives favour the use of franchise arrangements. Similarly, he reports some anecdotal evidence from the managerial-institutional literature which is also consistent with the physical dispersion, brand-

name capital, and managerial screening explanations.

According to Martin's (1988) results, franchising represents a long-run market solution to monitoring and risk diversification problems. In this paper he performs a franchisor life-cycle study which reveals that the proportion of company-owned outlets declines in the long run. The signs and the significance levels of the relative profitability and risk variables in this industry model are consistent with the hypothesis that uncertainty does matter in the franchising choice. These results rule out the capital shortage as the only reason for franchising because, if this were true, we should observe franchising only as a transitory phenomenon, which is not the case. Moreover, given various sites with different risk and expected return characteristics, the firm will take advantage of the opportunity to diversify the risk and to shed locations with higher risk-induced monitoring costs.

The results of all the models examined in this chapter, however, lead to the conclusion that with homogeneous outlets, the chains are fully franchised or fully company-owned; none of them is able to explain the existence of a mixture of contracts. In the following chapter we attempt to find an explanation on this avenue. In the second part of this work, then, we develop the analysis through empirically testable propositions.

To conclude, we have to mention two articles which provide an empirical assessment of recent developments in the area of agency theory in the context of partial vertical integration. First, Lafontaine (1992) tests various agency-theoretic explanation for franchising including risk sharing, one-sided moral hazard, and two sided moral hazard. "The empirical results are broadly consistent with a two-sided hidden action or

moral-hazard explanation of franchising, suggesting that there really are incentive issues on both sides. This result is consistent with previous empirical work (...). The notion that franchisees are more highly motivated than hired managers, and that this is a major advantage of franchising, is pervasive in that literature," (Lafontaine 1992, p.281).

Second, Shepard's (1993) findings confirm the idea that upstream firms offer contracts that allocate control in ways that best align the incentives and opportunities of downstream agents with upstream interests. She presents some empirical evidence from gasoline retailing which induce her to conclude that "contractual forms well suited to providing incentives are used when the downstream production process is affected in an important way by unobservable agent choices. Forms well suited to detailed, direct control are chosen when important downstream choices are observable (...). One of the issues of considerable theoretical and empirical interest not addressed by this study is how the set of observed contracts is constructed. This article has taken this set as given, but it is not so obvious that these three forms include the optimal contract for any given station. Indeed, it is easy to imagine alternative forms that might better protect the principal's interest. (...) Further work on this issue would be useful," (Shepard, 1993, p.76).

1.10. Conclusion

This chapter provided an overview of the existing literature concerning to the presence of different forms of organisations within the same firm, namely, the coexistence of vertical integration and vertical restraint patterns. In particular, among the different kinds of contract which arise from vertical separation, it focused on the franchise contract.

Several messages emerged from this preceding overview. First, vertical restraints may be seen as a response to principal-agent problems. Second, the use of a mixture of organisational forms within the same firm is determined by the choice of the optimal contracts, given agency costs. Third, more recent work highlights the importance of asymmetric-information problems and such related issues as moral hazard, risk sharing and monitoring costs. Nevertheless, it is clear from this analysis of the literature, that none of these models has been able to explain why firms choose a hybrid form of organisation, which arises from the adoption of heterogeneous contracts.

We shall attempt to fill this void in the remainder of this study. Firstly, to lay foundations for our analysis, we are going to make use of the results of some of these deficient theories which enjoyed support from empirical evidence. In addition, we are going to look at some models from labour economics, namely, those related to the selection of potential workers. Finally, we are going to amalgamate and extend them in order to formulate our problem as one of designing a contract, or set of contracts, that are optimal from the principal's and the agent's point of view.

2. The Design of Organisational Forms in the Presence of Uncertainty and Asymmetric Information: Integration, Delegation, or Both?

2.1. *Introduction*

Despite the large number of papers recently produced on the analysis of vertical restraints and their welfare implications, no clear unitary view has arisen on whether such contractual arrangements are adopted by manufacturers in order to enhance their monopoly power rather than for efficiency reasons (see Waterson, 1993, Seabright, 1996, and Dobson and Waterson, 1996). The lack of a unitary view is consequently reflected in the lack of a clear approach towards public policy implications of such contractual arrangements. Such is, for example, the case of the UK, where, as Seabright points out, while the policy measures on mergers and acquisitions are well defined, this is not the case for vertical restraints.

The general conclusion, which both the theory and public policy (both in EU and US) seem to suggest is that there is actually no general benchmark response to refer to, but rather, given the different circumstances in which these contracts are adopted, each

case should be analysed in its own specific context.

In this study we investigate the case of partial vertical integration (PVI) in order to see whether the contemporaneous adoption of a form of vertical restraint such as franchising, and vertical integration can be a possible achieved by the market in order to overcome information asymmetries and uncertainty related problems, rather than competition restricting purposes¹². The general approach followed in this chapter consists of studying whether heterogeneous contracts can be the result of a total surplus maximisation, of heterogeneous agents on the one side, and manufacturers on the other, in a competitive framework. Being very limited to this specific case, the analysis that follows cannot claim generality of its results. Nevertheless, it produces interesting insights.

More specifically, in this chapter we look at the design of industrial organisational forms/contracts by considering the case of a typical company that has to distribute its products/services on the market via a retail network of outlets. In order to do so, this company has to choose whether to retain these outlets in its ownership within a vertically integrated structure, or delegate their operation to independent retailers by means of a different contract, e.g., franchise. Alternatively, it could mix the two organisational forms, thus adopting a partially vertically integrated structure (PVI).

¹² Here we do not study (private and public) welfare effects of vertical restraints. See Dobson and Waterson, 1996 for an analysis of the issue.

As was illustrated in the previous chapter, many empirical works report on the coexistence of these two different organisational forms within the same company, resulting in the adoption of 'hybrid' organisational forms¹³. However, as we pointed out, the existing literature has not provided a satisfactory explanation of the phenomenon of PVI. Several types of models have highlighted different relevant aspects of the issue by stressing the importance of various variables affecting the organisational choice. Yet, none of these models has provided a thorough explanation of the observed contract-mix.

With the exception of very few works, the literature on franchising has modelled the upstream firm decision to franchise rather than own the unit downstream on the basis of heterogeneity across outlets. This heterogeneity was identified by different characteristics e.g., initial investment required downstream (Caves and Murphy, 1976; Brickley, Dark and Weisbach, 1991) the location of the outlet, and its distance from the company head office, briefly, the costs of monitoring the outlet's operation (inter alia, Brickley and Dark, 1987; Lafontaine and Bhattacharyya, 1995), the risk involved in the operation in a certain location (Martin, 1988; Norton, 1988), the typology of customers (Klein, 1980; Brickley and Dark, 1987). As Scott (1995) remarks "heterogeneity across outlets goes a long way toward explaining firm's choices of franchising vs. company-ownership," (p.70). Applying the results obtained by this literature to the case of homogeneous outlets would result in expecting a company to

¹³ Inter alia, Rubin (1978), Brickley and Dark (1987), Martin (1988), Brickley, Dark and Weisbach (1991), Lafontaine (1992), Shepard (1993) and Kwon (1993).

be either fully franchised or fully integrated¹⁴. This result is not consistent with the empirical observation¹⁵. In fact, in real-world markets, covariance between contract terms and outlet characteristics is not generally observed. On the contrary, only two customised contracts are adopted (Lafontaine and Shaw, 1996). Indeed, when reporting the main explanations provided by the literature to the question "what factors should enter the decision between establishing a particular unit as a franchise or keeping it under company ownership?" Milgrom and Roberts (1992) assert that none of them seems to be conclusive and their final answer to the question is "We know of no satisfactory explanation for this," (Milgrom and Roberts, 1992, p.566). The aim of this study is to investigate this issue. It intends to provide a rationale for PVI and to show that human capital issues, coupled with risk sharing and incentive issues drive this mixed organisational choice.

In the present chapter we investigate the question from a theoretical point of view along the lines of an agency relationship problem. We explore whether the existence

¹⁴ As even in the case of homogeneous outlets the existence of hybrid types of organisation has been reported by most empirical literature, see *supra*, previous footnote.

¹⁴ This theoretical puzzle gains momentum in the light of a recently growing tendency towards homogeneity in the retailing industry. As reported by the Financial Times (18.1.1995, p.8), the retailing industry is experiencing an increasing development of large out of town multi franchise dealers. These sites generally present extremely homogeneous characteristics in terms of distance from city centres, areas of location, size, layout, etc. Moreover, many chains adopting this organisational form present perfectly homogeneous outlets in terms of the features mentioned above and even of the layout of the products. This is, for example, the case of the chains "The Body Shop", and "Tie Rack", where all the outlets are exactly the same.

¹⁵ As even in the case of homogeneous outlets the existence of hybrid types of organisation has been reported by most empirical literature, see *supra*, footnote 13.

¹⁷ See for example Guasch and Weiss (1980, 1981), and Coyte (1984).

of these 'hybrid' organisational forms can be explained by the presence of uncertainty and asymmetric information when uncertainty concerns the state of the demand for the final product/service, and the informational asymmetries are twofold. First, they take the form of hidden action, in that the agent, the manager of the outlet, can cheat by choosing an action which is not optimal from the point of view of the principal, the manufacturer (moral hazard problem). Secondly, we highlight the presence of information hidden from the principal relating to the productivity level of potential agents when they can be of two different types, i.e., high and low productivity, which gives rise to a problem of adverse selection never investigated by the existing literature on the topic.

More specifically, we intend to study whether a firm's choice to expand through vertical integration or, instead, to employ 'partial vertical integration' by means of franchising contracts, may also depend on human capital issues, in other words, on hiring the right kind of agents (highly skilled managers and/or franchisees). When the ability and the motivation of the potential agent are unknown to the principal, the form of contract can be used as a screening device to generate a self selection process so that only high-skill workers would choose to sign the contract. A well established theme in labour economics¹⁷ suggests that "... firms can offer complicated wage-packages or wage plans and tests to compel heterogeneous potential employees to self-select according to their abilities," (Martin, 1988, p.205).

To sum up, this work aims at exploring whether the choice of a partially vertically integrated form -contract mix- can represent an organisational form which enables the

firm to overcome the moral hazard and adverse selection problems it faces in selecting managerial compensation schemes, within an uncertainty framework, where the agent is risk averse and the principal is risk neutral. Unfortunately, analytical intractability arises when trying to model all these features. As a result, this problem is solved by means of simulations, with intuition provided by diagrams. Hence, the general emphasis of this study, as well as the assumptions on which it relies, reflect the need of our particular investigation, and specifically, of looking for an explanation of PVI in the retailing sector.

Finally, we perform a comparative static analysis of the model by means of simulations. These experiments show in what way this organisational form is expected to change over the cycle. That is, the results of this model show that when demand increases, the company will expand via a larger adoption of franchising, consistent with the evidence reported by most empirical literature.

The structure of this chapter is as follows: after a brief discussion of the hypothesis proposed by this study to explain PVI in section 2.2, in section 2.3 we develop a model characterised by uncertainty about the state of the world and asymmetric information between a principal (the firm) and his agent (the manager). In first instance, section 2.3, the firm is assumed to operate in a perfectly competitive market while this assumption is relaxed in section 2.4 to one of monopolistic competition. In each case, the model is solved using non-linear programming, to show the existence of a separating equilibrium characterised by partial vertical integration of firms. The changing nature of this equilibrium over the business cycle is then assessed in the

following sections. Final remarks about the policy implications of these findings are presented in the conclusion. An empirical estimation of this model is then presented in the second part of this study.

2.2. Heterogeneous Labour Contracts as a Selection and Incentive Device for Heterogeneous Workers

Among the various models on incentive contracts¹⁸ suggested by the literature, the sharecropping contract is considered an effective contractual form to enable a principal to select high-skill workers. Sharecropping, which can be regarded as one of the earliest examples of incentive contracts, was first explained by Cheung (1969)¹⁹ with risk sharing issues. Franchising and sharecropping share many similarities,

¹⁸ According to Coyte (1984), the literature concerning employment contracts under asymmetric information has pursued three main avenues. "First, researchers have considered contracts in which the supply of employee effort is costly to monitor. Second, the allocation of labour has been examined when innate person-specific characteristics are unobservable. Third, employment contracts have been designed when economic agents are uncertain about the state of nature concerning the worker's marginal product and the employee's reservation wage," (Coyte 1984, p.469). These three branches of the literature have produced several models which aim to design contracts capable of reducing the distortionary effect of asymmetric information. Although these models acknowledge the existence of an incentive for the employer to screen the employees and suggest different screening mechanisms (see Guasch and Weiss, 1981, for example), they do not take into consideration the impact of these mechanisms on the optimal employment contract. In the analysis performed here, we will try and incorporate all of these three mechanisms, and to explore whether they can contribute to explain the existence of contractual heterogeneity within the firm.

¹⁹ Cheung's analysis does not involve any information asymmetries.

hence, we can examine if the rationale for sharecropping can, and, if so, to what extent, be applicable to the choice of distribution forms, such as franchised and company-owned outlets.

The logic of sharecropping contracts rests on the fact that a success-dependent compensation package would not be accepted by low-skill agents. On the other hand, high-skill agents would prefer it to a fixed salary because it makes their wealth dependent on residual income. As a consequence, "... one reason for a firm to choose franchising as a distribution form would be to facilitate managerial selection, because competent and motivated agents would accept (prefer) franchisee status," (Norton, 1988, p.205). Therefore the form of contract may be viewed as a screening device to select high-skill workers when ability levels are "hidden information" from the principal (Hallagan, 1978; Allen, 1982).

Hallagan (1978) builds up a model of self selection by contractual choice in the theory of sharecropping. In this model, he remarks that the coexistence of wages, rents and share contracts allows landlords to allocate resources more efficiently because it generates information on the ability of tenants. Those with high ability choose rent contracts so that they gain all the return to their ability; those with low ability choose wage contracts since these make their payments independent of their ability, and those of intermediate ability choose share contracts²⁰.

²⁰ Hallagan argues against Cheung's risk sharing argument by stating that this result holds also if all individuals are risk neutral. However, Hallagan's analysis abstracts from any moral hazard issues since the agent's action can be costlessly observed.

Can this principle be applied to PVI?

As reported by Norton (1988), a central feature of the literature on alternative organisational forms, and particularly on franchising, is that “franchise operations are the result of forces that restrict residual risk bearing to important decision makers. (...) While some labour contracts make employees (especially managers) residual claimants by linking their compensation somewhat to the residual income of the firm (or some relevant sub-unit) via sharing profits, (...) franchise contracts differ in that the franchisee becomes a residual claimant by paying an explicit franchise fee, and royalty fees,” (Norton, 1988, p.201)²¹.

In this work we argue that the different allocation of risk involved by these two contracts implements a self-selection mechanism on the agents and determines a fundamental difference in the incentive structure. The fact that franchisees’ income depends on their performance has two main consequences.

First, following the rationale for sharecropping illustrated above, the franchise contract only appeals to better skilled agents. In fact it can be seen as a contract that enables people who are willing to be entrepreneurs, as they are better skilled and more productive, to overcome the problems they have to face by setting up a private business, by allowing them a ‘semi-independent’ option (franchising) at a discounted risk rate. This comes partly from the franchisor’s participation in the investment but,

²¹ Norton’s analysis, however, concentrates the study on the hypothesis that franchising is a contractual option that enables the firm to grow at a fast pace, rather than explaining the adoption of heterogeneous contracts.

more importantly, it is due to the fact that the franchisor has usually a well known and established brand name which enables the franchisee to save the costs he would incur in order to build up a good name and a good reputation as he is a stranger to the market. Hadfield (1990) reports that franchising can be seen as a “low-risk alternative to an independent small business,” (p.959). This argument is supported by empirical findings of research conducted by R.M. Kight (cfr. Barrow and Golzen, 1988, p.32 and p.67), whose results are reported in Table 1-1 and Table 1-2, where all the points made above find evidence. Strong evidence in favour of this argument is further provided by the results of empirical research conducted by our study (see part II).

Table 2-1

The Advantages of Franchising		
	<i>Franchisees in agreement %</i>	<i>Franchisors in agreement %</i>
You can make more money in a franchise than in an independent business	51	47
A franchise is less risky than going it alone	78	88
A franchise offers greater job satisfaction than salaried employment	95	82
A franchise offers more independence than salaried employment	92	83
A franchise offers a proven business formula	83	99
A franchise offers the benefit of a known trade name	96	99
You can develop a franchise more quickly than an independent business	92	86

Table 2-2

Personal Franchisee Characteristics Required for Success						
	<i>Franchisees %</i>			<i>Franchisors %</i>		
	<i>Very Important</i>	<i>Important</i>	<i>Not Important</i>	<i>Very Important</i>	<i>Important</i>	<i>Not Important</i>
Previous management experience in the same industry	0	20	80	2	14	84
Previous own business experience	12	46	42	16	47	37
Management ability	84	15	1	66	31	3
Desire to succeed	90	10	0	93	7	0
Willingness to work hard	92	8	0	93	6	1
Creativity	26	56	18	12	44	44
Strong people skills	63	32	5	64	34	2
Financial backing	71	27	2	67	27	6

Secondly, the franchise contract provides the agents with much higher incentives to supply a high effort in their activity with respect to the managers. This comes from the fact that the franchisee runs the ultimate risk of bankruptcy or poor performance, having to bear the losses coming from a low performance, i.e., the investment made by the franchisee can be regarded as a bond posted on his future performance (Dnes, 1992a). This risk, therefore, works as a powerful regulatory device which is missing in

a performance related pay management contract²² where, in the case of a bad performance, the manager does not bear any losses, as he still gets his fixed income level²³. Our hypothesis is that this last contractual form will therefore be more appealing to low-skill agents.

To conclude, risk sharing arrangements such as those devised by franchise contracts, and PVI, are regarded by Martin (1988) and the literature on 'risk-sharing', as mutual insurance contracts arising when the principal (franchisor) is more risk averse than the agent (franchisee). Following our critique to this literature presented in the previous chapter, however, it seems more plausible to consider the franchisee to be the more risk averse party of this relationship. With a risk neutral principal Martin's analysis predicts that the outcome will be complete vertical integration. The model we are going to present in what follows argues that this is not the case. Conversely, it

²² Some evidence on this argument was found by Shelton (1967). In commenting on his empirical findings relative to the test of the "X-efficiency" hypothesis in a large company operating a string of restaurants on franchise and company-ownership bases, this author reports: "The evidence seems too persuasive to ignore. Despite detailed supervision, which would seem to minimise opportunities for managerial initiative, restaurants operated by independent franchisee-owners outperformed those supervised by company managers, even though the company managers are paid on a basis that involves some incentive compensation for achieving profits. (The company managers can earn a bonus for profitable operation that could go as high as 33 per cent of their salary, and typically averages 15 per cent.) The impact of motivation, arising from circumstances where the franchisee-owner (...) receives as income only profits, is revealed in the data that strongly support the importance of X-efficiency." (Shelton, 1967, p.1258).

²³ Furthermore, performance related bonuses have a limited incentive power in that they would induce the manager to care about short-term performance rather than the long term value of the business. We argue that even making performance related payments would not necessarily prevent some managers from pursuing personal agendas if they attach to them a higher utility than to the extra income (see the discussion of the rationale for privatisation, Vickers and Yarrow, 1988). That is, these incentive payments cannot rule out agent's moral hazard.

concludes that PVI can be efficient in the incentive-risk sharing trade-off when the principal is risk neutral and the agent is risk averse.

2.3. Optimal Organisational Forms in the Presence of Uncertainty and Asymmetric Information in a Perfectly Competitive Framework

Following Holmstrom and Milgrom's (1994) suggestion, we develop a specific analysis of an agency relationship in order to investigate the specific issue of PVI in retailing.

Our analysis meets the particular needs of the problem, that is, it investigates the possibility of the existence of an equilibrium of the type observed in the real case by means of simulation analysis. Hence, it suffers from many limitations. First, it cannot provide us with an analytical solution, but rather, we can only state that for certain values of the parameters, this equilibrium will arise. This, however, is compatible with our hypotheses. In other words, as will clearly result from the survey analysis reported in chapter three, we expect such a dual system to be optimal only under certain particular conditions. Where these conditions do not hold, i.e., as we move away from the range of the parameter values that generate this solution, such an

equilibrium can no longer be obtained²⁴. As Stiglitz (1975) already remarked, bounded rationality and information problems will imply continual experiment rather than 'perfectly stable' solutions.

Hence, we provide an answer to the problem which faces the restriction of a limited applicability. In fact, the solution to this problem provides a local optimum, but cannot certainly rule out the existence of other equilibria. However, this is by no means the first model in the area that resorts to simulation techniques²⁵. Lafontaine and Bhattachayya (1995), make use of simulations to predict when an outlet will be franchised or company-owned in a much simpler framework than the one considered here. These authors, in fact, analyse the case of PVI in a double moral hazard context where both principal and agent are risk neutral, and in the absence of agents'

²⁴ It is worth anticipating that some of the firms that responded to our survey reverted their organisational structure from a mixed one to either of the two extremes, i.e., either complete franchising, or complete vertical integration, when some conditions changed.

²⁵ Numerical simulations are used in a similar context by De Fraja (1996). In this paper two extreme cases of several possible organisational forms are considered: the entrepreneurial firm, and the managerial firm. The solution of De Fraja's model provided by the simulations shows that either ownership structure could be chosen depending on the values of the parameters, which represent technology and preferences.

heterogeneity²⁶. The adoption of simulation techniques is generally due to the fact that problems of this type become quite quickly analytically intractable²⁷. Such is our case.

The model

Following the hypotheses presented above, let us consider a framework characterised by the presence of both uncertainty and asymmetric information.

The *uncertainty* concerns the state of the world which can occur with respect to the demand for the product. Even though the state of demand is affected by the agent's

²⁶ Furthermore, this paper, still relies on outlets heterogeneity in its analysis. More specifically, Bhattachayya and Lafontaine assume monitoring to be perfect, which allows them to ignore incentive compatibility issues for the managers of the company owned outlets. The model collapses to predictions depending on the monitoring costs which are increasing in the geographical distance of the outlet from the monitor. Our critique to this approach is illustrated in the previous chapter (the irrelevance of the geographical distance variable on the contractual choice is confirmed by our empirical findings presented in chapter four of this study).

²⁷ Guesnerie and Laffont (1984) analyse a class of principal-agent problems which concerns only the case of adverse selection problems, nonetheless, even in the absence of moral hazard, they point out that analytical intractability can arise. These authors provide a converging algorithm which allows for computation of optimal solutions in such problems. Furthermore, Grossman and Hart (1983), study a case characterised by the presence of moral hazard, that brings to a market allocation under uncertainty which will not give rise to an unconstrained Pareto optimum. More specifically, they expand on important findings by Mirrlees (1975), who shows the fallacy of the procedures adopted by economic theory to derive optimal incentive contracts. In fact, Mirrlees states that if the solution to the agent's maximisation problem only provides a local rather than a global optimum, the solution is not unique, hence it cannot guarantee the optimality of a risk-sharing contract. Grossman and Hart (1983) provide a way to solve this problem by means of a convex programming problem. This procedure, however, relies on the agent's preferences over income lotteries being independent of action. Under these conditions, they show that it is never optimal for the incentive scheme to be such that the principal's and agent's payoff are negatively related over the whole outcome range. This result will be of interest for our purposes as will be showed below. Unfortunately the analysis of Grossman and Hart only concentrates on a problem of hidden action and abstracts from the possibility of the contemporaneous presence of hidden information. The lack, to this date, of studies covering all these features, has to be ascribed to the analytical intractability of this type of problems rather than to the novelty of these issues, as Myerson (1982) proves.

action e , it also depends on an exogenous component θ which can neither be controlled nor anticipated by either the principal or the agent.

For the sake of exposition we shall simplify our problem by assuming that²⁸:

There are only two effort levels in the action set, which can be expressed in monetary terms as follows:

$$e \in \{0, I\} \text{ where } I > 0$$

The stochastic component θ can only take on two values

$$\theta \in \{\theta_g, \theta_b\} \text{ henceforth subscript } g \text{ indicates 'good' and } b \text{ 'bad'.$$

The principal will observe the outcome X , but both e and θ are agent's private information²⁹.

More specifically, the *asymmetric information* problem is twofold.

²⁸ In this very simple version of the model the prices are normalised to one. In a following step we introduce a demand function.

²⁹ The non observability of this effort for the principal, is one of the sources of the information asymmetry between principal and agent. It can also be regarded as an investment. Such is the interpretation given to this variable by an influential branch of the theory of the firm, Grossman and Hart (1986), Hart and Moore (1990), Aghion and Bolton (1992). These authors, however, in line with the 'incomplete contract theory' assume that this variable cannot be specified by the contract at time 0, and is non-enforceable, although it can be observed by both parties after it is realised., i.e., information is symmetric. It would be of extreme interest to explore how the solutions provided to this game by these two branches of the literature (see Hart, 1995, for a review and critique of the agency and 'incomplete contracts' frameworks) would differ, however, this is beyond the scope of this research. Nonetheless, we can anticipate that, consistently with the above literature, the solution obtained here provides, under the specifications that will be illustrated in what follows, an equilibrium involving the transfer of residual rights to the party making the effort/investment.

1. *Hidden action*. We assume that the principal cannot observe the level of effort e exerted by the agents. As a consequence, there is a potential for employees to shirk. This possibility comes from the fact that the agents can blame the bad state of demand resulting from the unobservable stochastic component θ , for low performance.

2. There is a problem of *hidden information* which comes from the fact that potential workers differ in their productivity levels. For simplicity, let us divide these potential agents in two groups, ‘high-skilled’, (henceforth, ‘high’ types, subscript h), and ‘low skilled’, (henceforth, ‘low’ types, subscript l). The agents know their characteristics but the principals do not share this information. Agents’ heterogeneity is represented in our framework by the different probabilities these agents attach to the occurrence of the good state of demand once they exert the effort $e=1$. These are as follows:

$$\begin{aligned} \text{Prob}\left(X = X_g / e = 1\right) &= P_j \quad j = h, l \\ P_h &> P_l \\ \text{Prob}\left(X = X_g / e = 0\right) &= 0 \quad \forall j \end{aligned}$$

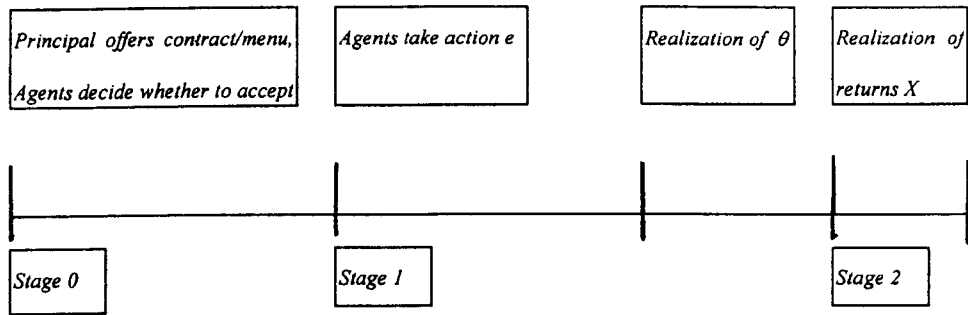
If X_g does not occur then $X_b < X_g$ does. Note that $P_j \neq 1$ because of the presence of the stochastic element θ

These probabilities are common knowledge, but the principal cannot observe the type of agent.

Finally, we assume that there is perfect competition on the market, which determines that the principal will earn zero profits on each contract (Rothschild and Stiglitz, 1976).

We intend to study whether under the assumptions of this model the adoption of a mix of franchise and fixed wage (management) contracts, i.e., PVI, could be an equilibrium dictated by the need to overcome the moral hazard and adverse selection problems, while allowing an ‘optimal’ allocation of the risk in a competitive framework.

The structure of the game³⁰ can be represented as follows:



Although this is clearly a dynamic game, the complexity of the framework constrained us to resort to a static representation. More specifically, we look for the existence of

³⁰ We represent this relationship as a ‘once for all event’. However, while this is the case for the vertical integration case, i.e., when the contract negotiated upon is of ‘employment’ type, which implies that it does not fix an end date, it is not so for the case of delegation, i.e., the franchise contract. The provision of an ‘end date’ for this relationship -generally between 5 and 15 years-, implies that in the majority of cases, this contract will be renegotiated. Although we do not explicitly model this, we try and take into account the consequences that this option generates on the franchising relationship. For example, unlike other models on franchising which have been stressing the double moral hazard problem (e.g., Lafontaine and Bhattachayya, 1995), we abstract from the principal’s moral hazard since we assume that reputation motives would rule out such case in a repeated game (see Lyons, 1996, for a survey on this issue). This assumption, despite being widely accepted in literature, is supported by empirical evidence presented in the second part of this study.

an optimal solution at time zero, which would solve all the subgames in the following stages. In other words, our problem can be summarised as follows:

Problem: *The principal's problem consists of offering a contract/menu specifying a payment rule at stage zero. The revelation principle shows that in order to maximise his expected payoff, the principal can restrict the choice to contracts that are accepted by all agents (individual rationality), that are incentive compatible, and that induce a truthful revelation of their type by the agents (self-selection). Can such a solution be represented by PVI?*

Let us describe first a generic, implicit formulation of the main characteristics of the problem, and then present the explicit characterisation of the case under analysis.

The risk-neutral principal's expected payoff $E(\Pi)$ will be:

$$E(\Pi) = \Pi(X_g, w) \cdot P_j(e) + \Pi(X_b, w) \cdot [1 - P_j(e)] \quad \text{where } j=h, l \text{ and } e=0, 1$$

$$\Pi_X > 0 \quad \text{and} \quad \Pi_w < 0$$

That is, this payoff is linearly increasing in the returns to the operation X , and decreasing in the payment to the agents w .

The risk averse agents' payoff will then be

$$U = U(w, e)$$

$$U_w > 0, \quad U_e < 0 \quad \text{and} \quad U_{ww} < 0$$

The agent's utility is increasing in the payment w , and decreasing in the effort e .

The first best for the principal would be to offer a fixed payment to the agent which just covers the cost of effort I , and keep all the profits coming from the operation at stage 2. In fact, the solution to the maximisation of the principal's payoff, given the agents' risk aversion, is $w=I$. See also Arrow (1970).

However, the solution to the problem cannot be characterised by such a (full insurance) pooling equilibrium as this would not be incentive compatible.

Let us now assume that the principal can offer one or both of the two different contracts mentioned above, i.e., *contracts feasible set*:

1. A *fixed wage (contract)* ' w ', independent of the outcome. In such a case the agent will be a manager and the outlet will be retained as part of the company (vertical integration). 2. A *franchise contract* ' $\{w_g, w_b\}$ '. In this case the agent gets a payment which depends on the outcome. This implies that the agent will own the outlet and will pay a fixed fee to obtain this right, this is the vertical separation case. The mixing of these two kinds of contracts is the PVI case.

Assuming that the contract feasible set only contains the two contracts described above, tailored to the two different agents' type, might seem a restrictive hypothesis. However, this is not the case for two main reasons. First, we could assume that there is a continuum of (productivity) agents type¹, and that there is a threshold level above which they can be regarded as 'high' type and below which they are considered low types. The analysis that follows, and its results, would equally apply. An analogous point is made by Salop and Stiglitz (1977), who show that price dispersion can arise in

a market characterised by the presence of agents who differ in their ability. These authors analyse a case in which there are two groups of consumers who differ in their information gathering costs concerning the price of a homogeneous product. In such a framework Salop and Stiglitz obtain a basic ‘two price equilibrium’, with a low price for the ‘low-cost’ customers and a high price for the ‘high-cost’ customers³¹. Second, we can argue that in the presence of a continuum of types the large transaction costs that would come from the design of a specific contract for each agent type would certainly offset the efficiency gains arising from contract customisation.

Proposition 1: *An equilibrium can consist of a menu of contracts, i.e., two, one per each agent’s type. The existence of two different contractual forms, i.e., a PVI organisation, constitutes a truth telling, separating, equilibrium, which generates a self-selection process of heterogeneous agents, thereby solving a potential adverse selection problem³² (self selection constraints SS), while being individually rational*

³¹Salop and Stiglitz (1977) make use of three conditions to derive the equilibria in their model. First, the maximisation of the profits from the principal (manufacturer), second, the competitive condition that drives these profits to zero, and third, optimal information gathering from the agents. These three conditions will be adopted in the analysis that follows, with the last one being replaced by the agents optimising the expected utility coming from their contract. This will also be quite clear from our graphical study of the problem presented at the end of this section. The analysis of Salop and Stiglitz leads to a monopolistically competitive outcome. Such will be the case in the more elaborated version of the model described here. This is illustrated in the section that follows.

³²The idea of the implementation of a menu of contracts, two in our case, for screening and incentive purposes has been studied by Laffont and Tirole (1993) who apply it to the analysis of regulation. As these authors report, in the case of menus of managerial incentive schemes in corporations, “many managers are given the choice of cashing their bonuses or stock options or transforming them into stocks or stock options. They thus face a menu. The option of cashing in on rewards for past performance can be viewed as a low-powered incentive scheme in which the manager decides not to be rewarded according to performance in the future. The option of buying (further) stocks or stock options can be viewed as choosing a high powered incentive scheme. Presumably the second option has a higher expected reward than the first and will be selected by those managers who are confident about the firm’s future profits,” (Laffont and Tirole, 1993, p.82).

(participation constraints PC_j) and incentive compatible (incentive compatibility constraints IC_j).

Let us develop the analysis of proposition 1 one part at a time. We then present the proof at the end of this analysis.

Proposition 1A (agents' side). *In the equilibrium high types prefer residual rights, i.e., the franchise contract $w_h = \{w_g, w_b\}$, and low types choose a fixed wage, management contract, $w_l = w$.*

For the purpose of our simulations let us assume that the agent's utility function exhibits Constant Relative Risk Aversion.

1. High types- franchise contract, w_i -

The trade off between risk sharing and incentives for these types can be solved by the principal with the offer of a payment schedule that makes their wealth dependent on the outcome, in other words:

$$U_h = (t \cdot X_i - f - e)^r \quad i=g,b \text{ and } e=0,I$$

where $(1-t)$ is the royalty rate of the franchise contract, with $0 \leq t \leq 1$; and f is the franchise fee. r is the risk aversion coefficient.

Since f and t are fixed, however, we simplify the set up of the model by defining

$$w_i = (t \cdot X_i - f)$$

Which enables us to represent the franchisees' payoff in terms of an income variable contingent on the state of demand.

The expected utility coming to the high type agents from this contract will be

$$E[U_h] = P_h \cdot (w_g - I)^r + (1 - P_h) \cdot (w_b - I)^r$$

2. Low types- management contract, $w -$

Unlike the franchise contract, the fixed wage contract, offered to the managers of the company owned outlets, is not incentive compatible. That is, since the managers get a fixed wage, they have an incentive to cheat by slacking. Therefore, the management contract will have to be designed in such a way as to take into account this moral hazard problem. In order to control for this, we resort to the 'efficiency wages' argument³³, and in particular to Shapiro and Stiglitz (1984), who suggest looking at unemployment as a regulatory device in the labour market. These authors demonstrate that when there is perfect competition and all the workers are employed at the market clearing wage, there is no incentive for the workers not to cheat, as the worst that could happen is that they are fired, but, as they can be immediately rehired, they pay no penalty for this misdemeanour. Hence, all the firms will offer a higher wage, namely, an efficiency wage, thus reducing their demand for labour. The resulting unemployment induces the representative worker not to cheat for, if he cheats he is fired. Being fired involves bearing a cost for the manager. This cost comes from being unemployed until he finds another job, and this cost is clearly increasing in the level of unemployment.

³³ For evidence on this, see Krueger (1991).

In order to simplify the analysis, we assume that whenever the manager shirks the bad state of demand occurs, and that whenever the bad state of demand occurs, the manufacturer will infer that the manager did not put any effort into his activity, i.e., he shirked, and will therefore fire him. This last assumption is made throughout the literature, and, as will be shown by the results provided by the model, does not affect the solution³⁴.

The low productivity type payoff coming from the management contract is³⁵:

$$U_l(w, e, H) = \begin{cases} (w - I)^r & \text{if } X_i = X_g \text{ and } e = I, \\ (w - I - H)^r & \text{if } X_i = X_b \text{ and } e = I, \\ (w - H)^r & \text{if } e = 0 \end{cases}$$

where w is the fixed efficiency wage, and H is the punishment, or cost, derived from losing the job.

Hence the management contract will provide these agents with

$$E[U_l] = P_l \cdot (w - I)^r + (1 - P_l) \cdot (w - I - H)^r$$

In order to induce the agent to accept the contract it must be

$$E[U_l] \geq U_{rl} \quad (\text{PC}_l)$$

³⁴These results would still hold true by attaching a positive probability to the agents not being caught when shirking. In fact, such a case would only change the magnitude of the solution values of the endogenous variables at the equilibrium, without affecting its nature.

³⁵ In equilibrium the management contract will only be chosen by low types while the high types will prefer the franchise contract.

Moreover, for this contract to generate the right incentives for the agent it will have to be

$$E[U_l] \geq (w-H)^r \quad (\text{IC}_l)$$

Finally, for both agents/contracts we have a self selection constraint. The correct functioning of the self-selection mechanism, such that each agent will pick the contract designed for his own type is guaranteed by the fact that the level of the expected utility coming to each agent from the contract designed for his own type is higher than the expected utility from accepting the contract designed for the other type of agent. In other words, the probability attached by the agents to the occurrence of the good state of the demand³⁶ P_h and P_l are weights in the payoffs (expected utility functions) which ensure that the agents self-select.

Proposition 1B (principal's side). $w^* = (w_l, w_h)$ is a vector of payment rules which maximises the principal's payoff.

Let us assume that the principal's payoff is separable in the share coming from the low and the high types. These will be respectively

$$\Pi_l = X_l - w_l$$

$$\Pi_h = (1-t) \cdot X_h + f$$

³⁶Recall that the probability of occurrence of the good state does depend on the agent's effort, and on a stochastic component.

According to the simplification adopted above in U_h , we can rewrite this last pay-off as:

$$\Pi_h = X_i - w_i$$

Hence, the principal's expected payoff will be

$$E[\Pi_l] = P_l \cdot (X_g - w) + (1 - P_l) \cdot (X_b - w)$$

$$E[\Pi_h] = P_h \cdot (X_g - w_g) + (1 - P_h) \cdot (X_b - w_b)$$

In order to test that PVI is a choice driven by efficiency reasons, we maximise the total surplus deriving from the above outlined agency relationship. Because of the competition assumption, the principal's profits will be driven to zero, therefore, our objective function becomes the surplus of the agents (in the next version of the model, presented in the following section, we will elaborate on this). Given the structure of the model outlined above, it is solved as a general equilibrium model. Hence, in the formulation of our objective function, that can be regarded as a social welfare function, we follow Kreps (1990). According to this author "we might wish to maximise some sort of weighted sum of the consumer's expected utilities." (p. 675). In our case we maximise the expected utility coming from the agents' contracts. Assuming there to be the same number of high and low type agents (this assumption is relaxed in the following, more elaborate, version of the model), this can be expressed as an expected social welfare index presented in our maximand equation (8).

Hence, the first simplified set up of the model, solved by simulation techniques, is as follows:

$$\max_{w_j, U_{rl}, U_{rh}, \Pi_j} E[W] = (E[U_l] + E[U_h]) / 2 \quad (8) \quad j=h,l$$

s.t.

$$E[\Pi_l] \geq 0 \quad (1)$$

$$E[\Pi_h] \geq 0 \quad (2)$$

$$E[U_l] \geq U_{rl} \quad (3)$$

$$E[U_h] \geq U_{rh} \quad (4)$$

$$E[U_l] \geq P_l \cdot (w_g - l) \cdot r + (1 - P_l) \cdot (w_b - l) \cdot r \quad (5)$$

$$E[U_h] \geq P_h \cdot (w - l) \cdot r + (1 - P_h) \cdot (w - l - H) \cdot r \quad (6)$$

$$E[U_l] \geq (w - H) \cdot r \quad (7)$$

Equations (3) and (4) represent the Participation Constraint for the low and high types respectively. The self selection constraints for the low and high types are respectively equations (5) and (6). As we remarked above, we also have an incentive compatibility constraint for the low types, equation (7).

Proof: The solution

As mentioned above, since models characterised by uncertainty and risk aversion in the presence of hidden action and hidden information in a competitive framework are algebraically intractable, we resorted to the use of simulation analysis. Our problem was solved as a general equilibrium model by means of the non linear programming option of the GAMS (General Algebraic Modelling System) software³⁷.

³⁷ GAMS is a software designed for the solution of large mathematical programming models by means of linear and non-linear optimisation techniques. Once the equations of the model are set, the variables defined either as exogenous (fixed type) or as endogenous (free type), and the objective function declared, starting from some arbitrary values given to the parameters, then, first of all GAMS checks whether or not the model is feasible and can provide an equilibrium solution which is consistent with all the equations. Subsequently, it looks for an optimal solution through an iteration system. See Appendix 2-7.1 for an explanation of the GAMS solution techniques for non linear programming.

The values given to the parameters of the model are reported in Table 2-3

Table 2-3

Parameters	values
P_l	0.5
P_h	0.75
I	0.15
H	0.33
r	0.5
X_g	3.0
X_b	1.0

The results obtained by GAMS³⁸ confirmed that this model is consistent and provided the optimal values corresponding to the endogenous variables and the equations at the equilibrium solution. They are reported in Table 2-4 and

Table 2-5 below³⁹.

³⁸A copy of the model programmed in GAMS is reported in the appendix to this chapter.

³⁹ The output given by GAMS indicates the lower, level, upper and marginal values of the optimal solution with respect to all the variables and the equations of the model. 'Lower' and 'upper' indicate the lower and upper bound of the interval of values the variable can take on, 'level' indicates the value of the variable at the optimum.

Table 2-4

VARIABLES	Lower	Level	Upper	Marginal
$E(I)$	0	0	0	-0.969
$E(W)$	0	1.984	$+\infty$	0
w	0.500	2.00	$+\infty$	0
U_{rl}	0.100	1.666	$+\infty$	0
U_{rh}	0.500	2.303	$+\infty$	0
w_g	2.000	3.155	$+\infty$	0
w_b	0.300	0.534	$+\infty$	0

Table 2-5

EQUATIONS	Lower	Level ⁴⁰	Upper	Marginal
(1)	0	0	0	0.499
(2)	0	0	0	0.470
(3)	0	0	0	-0.500
(4)	0	0	0	-0.500
(5)	0	0	$+\infty$	-0.015
(6)	0	0.556	$+\infty$	0
(7)	0	0.016	$+\infty$	0
(8)	0	0	0	1

These results provide an equilibrium solution consisting of the contemporaneous adoption of both kinds of contracts (PVI) shown by the existence of a vector of prices (for the fixed wage and the share contract) consistent with the hypotheses of the model. However, they depend crucially on the values of the effort cost I and of the punishment H ; that is, if the cost of unemployment is larger than the cost of effort, the assumptions of this model hold true and provide an optimal solution consisting of a

⁴⁰When the level corresponding to an equation is zero this implies that the constraint is binding.

separating equilibrium with two different contracts offered to, and accepted by, the agents. That is, whenever the unemployment rate is above a certain level which enables it to work as a disciplinary device, we obtain what follows⁴¹.

The principal's expected profits, consistent with the competition assumption, are zero on both contracts, as equations (1) and (2) report. Again, consistent with the assumptions of the model, the participation constraints of both types, represented by equations (3) and (4) prove that these contracts provide the agents with their reservation utility levels⁴². The incentive compatibility constraint on the low types (equation 7) is not binding, which implies that the contract is designed in such a way that the agents get a higher utility by making the right effort in their job than they would get from shirking. This is a different~~our~~ results with respect to the standard literature, where it is generally found that the agents will be offered a contract that just about ensures that they exert the effort required but does not leave them any rents. The existence of rents proved by our results confirms the proposed efficiency wage hypothesis. The self-selection constraint of the low types is binding (equation 5), while the one of high types is not binding (equation 6). Thus confirming that high types will earn rents due to their informational advantage (see next section for evidence on this point). In other words, the high types will earn a surplus (informational rent) which will discourage them from pretending to be low types.

⁴¹ In this first formulation of the model the level of unemployment, and therefore the punishment, are exogenous. However in the following, wider, formulation of the analysis (reported in next section), it will be endogenised in the model.

Since this model implies the adoption of non-linear programming calibration techniques, the optimal solution obtained presents particular characteristics. First, the equilibrium obtained tells us that this model holds true, and provides a first best solution of the 'contract mix' type, only for certain values of the parameters of the problem, that is, this is a local optimum. Second, as we move away from these values, the model becomes unfeasible, and shows that PVI cannot be regarded as a global optimum⁴³. This is consistent both with the general results in literature, as we explain below, and with our hypotheses⁴⁴. In fact, by this model we suggested that contractual heterogeneity represents an optimal solution when both the firm and the agents face certain constraints and choose their contracts within a certain environment (i.e., attitude towards risk of both actors at play, unemployment rate, cost of effort, etc.). This will be clear from the analysis of the responses to our survey presented in the next chapter.

In the last part of this section we are going to complete the analysis presented so far by a graphical derivation of the equilibrium for this market.

⁴² The reservation utility level is endogenous to the model. It is determined by the competition conditions (see Varian, 1992, p.464).

⁴³ We will not concentrate on the effects of changes in risk over this organisational structure (see Lafontaine and Bhattachayya, 1995). When simulated different coefficients of risk aversion, the model gave similar solution. However, with agents' risk neutrality, the GAMS outcome was that the model was not feasible.

⁴⁴ We do not concentrate on specifying the interval of parameter values for this solution to be feasible since, given the formulation of the model, this would not be informative. In the following part of this study we will try and illustrate some real cases where changes of some features, e.g., moral hazard, implied firms changing their organisational/contractual structure. A scenario analysis is performed in the following sections to investigate comparative statics of the more elaborate version of this model presented in next section.

In this geometric investigation of the equilibrium we proceed as follows: a potential equilibrium (contract/menu of contracts) satisfying the zero profit condition is proposed. We first check (i) whether this is feasible, i.e., satisfies the agents' participation constraints, and if this generates the right incentives for the agents to exert effort. Then, (ii) we examine whether this contract/menu maximises the agents' utility. In other words, we check whether a deviant principal could increase his profits by offering a different contract/menu that would yield higher utility to one or both agents type. If the latter is the case, then the potential equilibrium is not an equilibrium.

Again, let us proceed by steps. First, let us look at the case of the low-type agents.

Lemma 1. *The need to control for moral hazard of low-type agents rules out the choice of a 'full insurance' contract and induces the adoption of a 'potential' unemployment penalty (H) on the principal side. The management contract implemented in a competitive equilibrium will be contract M as illustrated in Figure 1.*

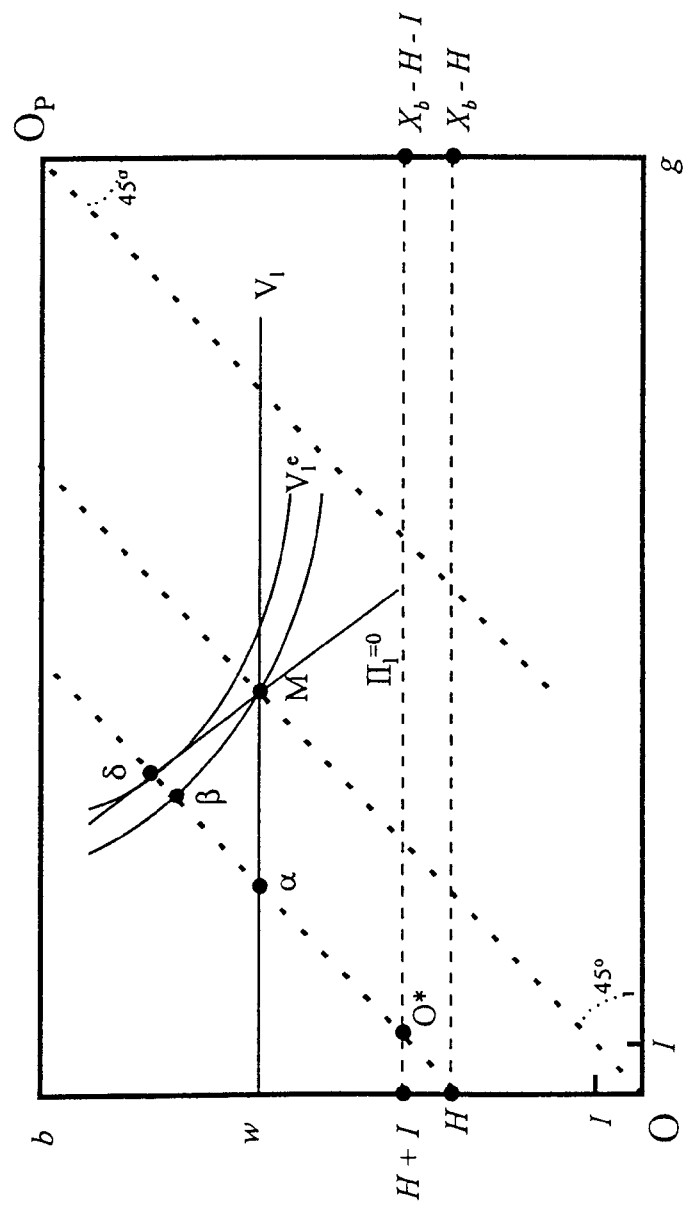


Figure 1

Proof. Point O is the starting point for the managers. Starting from this point, a 45 degree line departs, this being the locus of full insurance contracts for the managers. The contracts lying along this line in fact give to the managers the same share of returns in the good and bad state of the world, X_g and X_b , measured respectively on the horizontal and vertical axis. The discussion is analogous for the principal, starting from point O_p . However, as we discussed above, when the bad state of demand occurs the manager is fired, thus incurring a cost of H . This loss of H will reduce the space in our diagram to $[H, b, O_p, (X_b - H)]$. Therefore, in such a case, we have a new 45 degree line departing from point H . Moreover, we assumed that whenever the manager does not exert effort the bad state of demand occurs with probability 1. This implies that the manager's payoff will be $(w-H)$, hence, his indifference curve will be a horizontal straight line corresponding to this value, i.e., V_1 in Figure 1. The intersection of this indifference curve with the full insurance (45 degree) line departing from point H will determine point α . Thus the distance $H-\alpha$ represents the certainty equivalent of the manager's payoff in the zero-effort case. Conversely, if the manager exerts effort I , his payoff will be further reduced by this cost. Therefore in this instance the manager will lose an amount equal to I in the good times and to $H+I$ in the bad times. This implies that the space in the diagram in Figure 1 is further reduced to $[(H+I), b, O_p, (X_b - H - I)]$, and the new full insurance (45 degree) line to the manager will have origin in point O^* . However, when the manager exerts effort ($e=I$), his set of indifference curves, originating from the new origin O^* , is V_1^e . The tangency between the highest indifference curve corresponding to the 'effort' case, and the zero-profit line to the

principal corresponding to the contract for the low-types ($\Pi_l = 0$) determines contract δ . However, contract δ cannot be an equilibrium according to point (i) above. That is, it is not incentive compatible. If the manager were to be offered a full insurance contract like δ he would not exert effort as the certainty equivalent to his payoff in case he shirked ($H - \delta$) would be higher than the certainty equivalent corresponding to the payoff coming from exerting effort $I(O^* - \delta)$.

Therefore, in order to avoid the moral hazard problem, the principal will not be able to offer a full insurance contract to the managers. Hence, competition among principals and incentive compatibility will drive the contract choice to contract M, which rewards the manager with a payoff equal to $(w - I)$ in the good state of the world and $(w - I - H)$ in case the bad state of the world occurs. This contract is equivalent to full-insurance contract β as it lies on the same indifference curve V_l^e . Therefore, the certainty equivalent to contract M will be given by the distance $O^* - \beta$. It follows that contract M will be an equilibrium as long as $O^* - \beta > H - \alpha$. In fact, contract M in Figure 1 is an equilibrium as: (i) it satisfies both the participation and the incentive compatibility constraints. The latter is non binding as this contract is such that $H - \alpha < O^* - \beta$. Let us check this equilibrium against point (ii) above. If a deviant firm intends to increase its profits, it could deviate from contract M and offer a contract in the south-west region of M- β . However, any such contract would give lower utility to the agents, therefore, as long as contract M is offered, no other contract will be accepted by the agents. Hence, contract M is an equilibrium. Moreover, consistent with our results above, contract M is only feasible as long as the cost of the punishment H is

large enough with respect to the cost of effort I . Hence it follows that

Lemma 2. *When the punishment H is sufficiently small with respect to the cost of effort I no equilibrium can be attained.*

In fact, unless there is enough unemployment to work as a disciplinary device the principal will not offer any management contract.

Proof. This is illustrated in Figure 2 where H is smaller than in the previous case represented in Figure 1. In this instance, the agent will be better-off by not exerting any effort, in fact it is clear that the certainty equivalent corresponding to the case of shirking $H-\alpha$ is larger than the certainty equivalent to the payoff of the ‘effort-case’, $O^*-\beta$. Hence, in this setting a contract that rewards the agent with a payoff equal to $(w-I)$ in the good state of the world and with $(w-I-H)$ in the bad state, that is, contract M in Figure 2, does not satisfy condition (i) above, i.e., is not incentive compatible. To sum up, the principal will not be able to offer any incentive compatible contract without incurring losses given the new value of H , as shown by Figure 2 below. Therefore, no equilibrium exists.

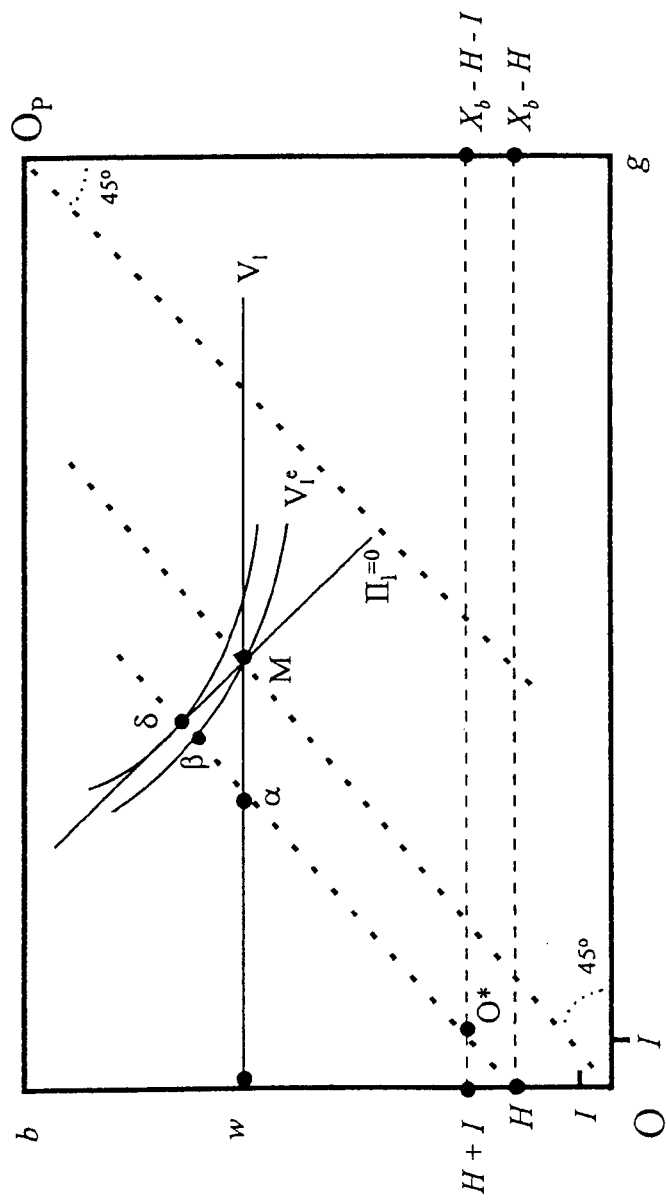


Figure 2

Following the description of the franchise contract outlined above (sub proposition 1A), we can now introduce the high types into this framework. This case is illustrated in Figure 3, where the set of indifference curves for these types is labelled V_h . These curves are steeper than those of the low types, labelled V_l^e , as these agents attach a larger probability to the occurrence of the good state of demand. We do not have the no-effort set of preferences for the franchisees, due to the fact that this contract, bringing about an alignment of the principal's and agent's interests, as illustrated above, always implements $e=I$. Hence, the origin for the indifference curve set V_h is point $I-I$ in the diagram. The zero-profit line related to these types is labelled $\Pi_h^=0$.

Lemma 3. *In the presence of heterogeneous agents two contracts may be offered, thereby generating a separating equilibrium .*

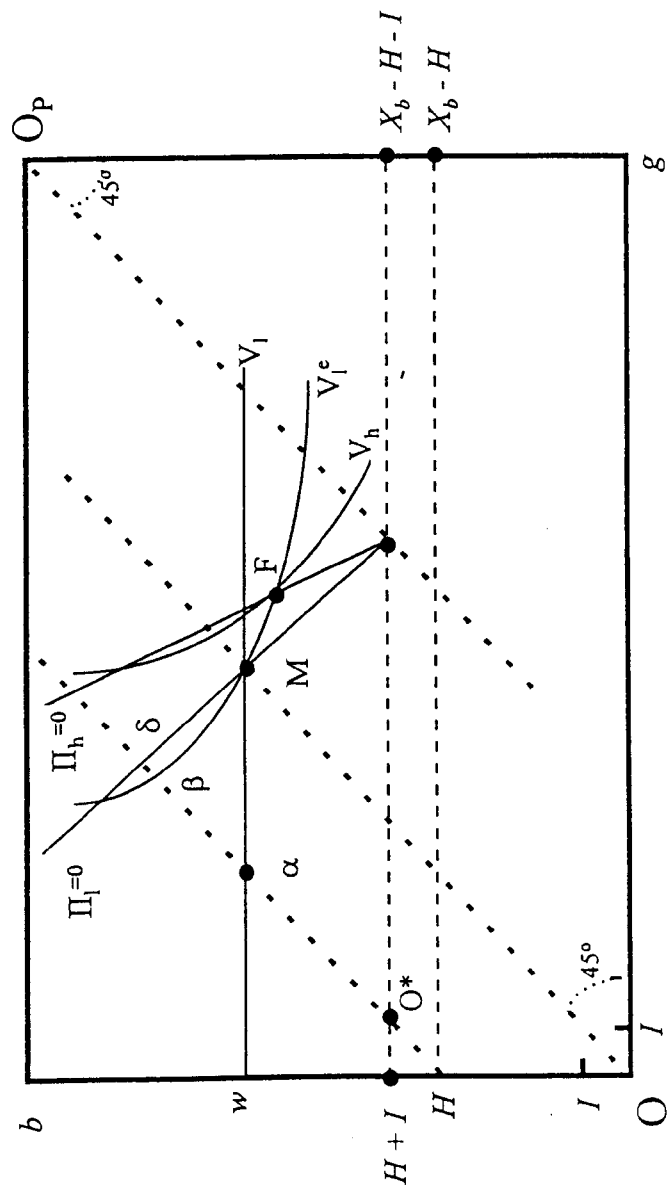


Figure 3

Proof. Figure 3 shows that also in this case the results obtained above are confirmed. In other words, by adding the high types to the analysis we obtain a separating equilibrium given by the principal offering (and the agents accepting) two different contracts, i.e., M, the management contract for the low types, labelled w_l in the analysis above, and F, the franchise contract for the high types, labelled w_h above. This contract pays the franchisees a payoff equal to $(w_g - I)$ in the good state of demand X_g and $(w_b - I)$ in the bad state of demand X_b .

The conditions set above for the determination of the market equilibrium all hold for the contract pair {M - F} in Figure 3. First, these two contracts lie on the zero isoprofit lines for the principal with respect to each category of agents. Second, and in addition to the criteria set above, each contract is chosen by the type of agents it is designed for. That is, contract M is the best for the low type and contract F is the best for the high type agents. This is reflected in the Self Selection constraints (SS_i) designed in the problem above. In order to satisfy SS_l contract M must lie on or above the low type indifference curve passing through point F, i.e., the contract designed for the other type. In this instance, since contract M and F lie both on VI^e this implies that the self selection constraint on the low types is binding. Analogous discussion holds for SS_h , but this constraint on the high type agents does not bind, that is, these agents obtain a higher utility from choosing contract F rather than M. It is easy to see that contract M lies on a much lower indifference curve for the high types, V_h , than contract F. The explanation for this was presented above. Third, condition (i) set

above holds for both contracts M and F. These contracts satisfy both the participation constraints and the low type incentive compatibility constraint (see Lemma 1 above for a proof of the latter). Finally, condition (ii) is satisfied, that is, no other contract can be offered in addition to those in the menu, that would make strictly positive profits for the firm offering it if the agents choice rule obeys the maximisation of the expected utility for each type. This is illustrated in Figure 4 below.

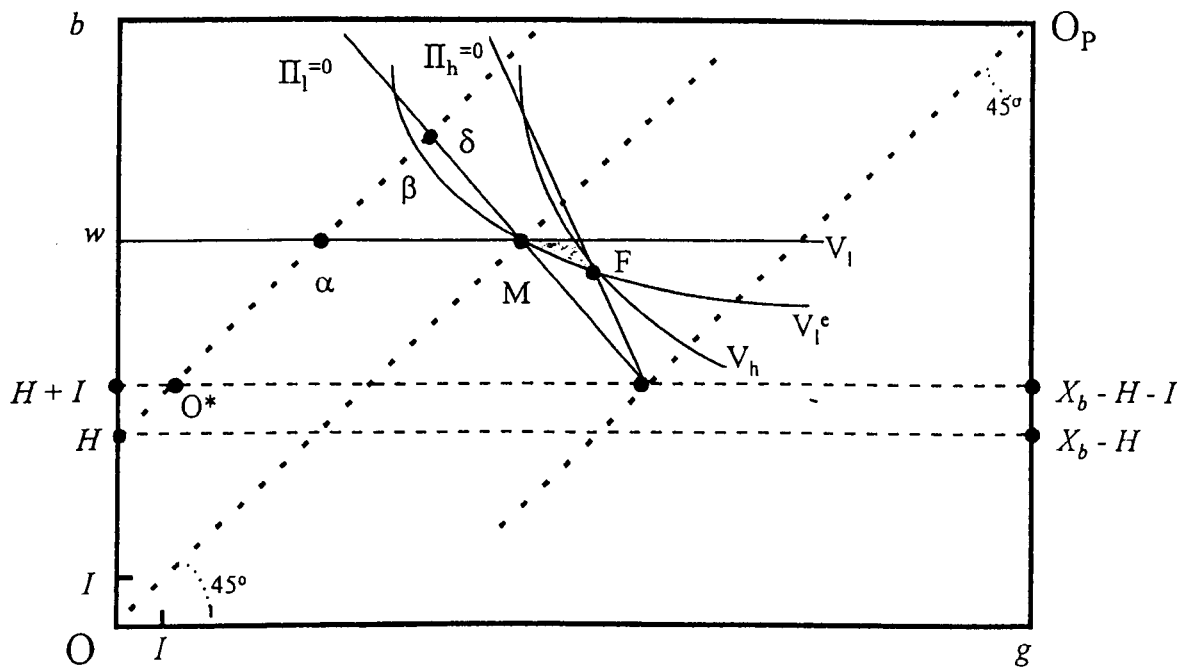


Figure 4

If a deviant firm were to offer a contract lying in the shaded area (which would earn positive profits on the high types), since such contract would yield a higher utility than contract M to the low type agents, they will take it. But this contract would generate losses for the principal if the low types take it. Conversely, it will not be preferred to contract F by the high types, as it would give to them a lower level of utility, therefore

such a contract cannot be an equilibrium. Note that it would be possible that a pooling equilibrium exists only in the case when there is a very small number of ‘low-types’, in this instance the principal might offer a pooling contract lying in the shaded area. However, such a case seems extremely unrealistic. In fact one would expect the number of ‘unskilled’ agents to be a lot larger than the number of ‘high-skilled’ agents.

Therefore, contracts M and F represent a set of contracts that implement the PVI solution to the problem set out in proposition 1, QED.

To sum up, our results, as illustrated by the analysis presented above, are of particular interest as they show that, in a specific framework like the one described here, PVI can be an equilibrium driven by reasons other than competition restricting (monopoly power enhancing) targets.

2.4. *The Case of Monopolistic Competition*

Having made sure that the initial model was feasible, we then extended it by relaxing the perfect competition assumption in order to consider a case of monopolistic competition, (Chamberlinian competition). This market structure, in fact, seems to be the most appropriate to represent industries characterised by the presence of PVI, i.e., retailing and distribution, services, hotels, restaurants, and fast-food chains (see Kreps,

1990, p.346). Such industries are the object of the empirical investigation carried out in order to test the hypotheses formulated in this chapter (see below, part II).

The framework presented in the previous section is extended as follows. We now assume that the total population of agents is a fixed number, given by the sum of low and high types $N = N_l^* + N_h$, and that N_l is the number of low types in employment. Hence $N_l^* - N_l$ is the level of unemployment on the market for low productivity agents, which will work as a regulatory device, now endogenous to the model (the labour market is represented in figure A below). The high types are assumed to be fully employed given their entrepreneurial characteristics described above.

Let us look at the product and labour markets in turn.

Product market: According to the definition of Chamberlinian competition, we consider now the case of several firms competing in the product market but still earning zero profits. Hence we have now a downward sloping demand function for the product facing each producer.

The inverse demand equation for the product is:

$$E[P] = A - N_l \cdot [P_l \cdot Q_g + (1 - P_l) \cdot Q_b] - N_h [P_h \cdot Q_g + (1 - P_h) \cdot Q_b] \quad (1)$$

This is of the simple linear form $E[P] = A - E[Q]$, where $E[P]$ is the Expected Price; A is a positive constant which varies over the cycle, and $E[Q]$ is the Expected Quantity,

expressed as the sum of the expected outputs of the two types of workers⁴⁵. Q_g and Q_b are the levels of output in the good and bad state of demand respectively.

Therefore Expected Revenues are

$$X_i = E[P] \cdot Q_i \quad i=g,b \quad (2) \text{ and } (3) \text{ respectively.}$$

Let us assume that the set of feasible contracts is again as outlined in the previous section (w_i, w).

Proposition 2: *Proposition 1 (see above) still holds true in a monopolistically competitive framework.*

This is illustrated in detail below.

Labour market. Let us look at the demand and supply side by distinguishing between the market for low and high types.

⁴⁵ As the simulation analysis performed in the following section shows, the only endogenous variables to the model in the $E[Q]$ equation are the numbers of agents N_h and N_l , therefore, maximising our objective function (total employment) will imply maximising total output.

Proposition 2A (agents' side). The Supply side. *See proposition 1A above.*

1. w -low types- management contract

Competition among the low types will make them all willing to accept a labour contract which provides them with their reservation utility level (U_l in Figure A). However, the principal will pay these agents an efficiency wage (w in Figure A), in order to avoid the moral hazard problem.

In this second version of the model the parameter I differs from that in the first version. While in the previous case it represented the effort required by the agent, it now indicates the value of the principal's investment. Therefore, the moral hazard problem in this model is represented by the agent taking this investment I , that is, it might involve perquisite taking or the agent's shirking involving the waste of the principal's investment or tarnishing the brand name. T then represents the punishment. It is a linear function of the unemployment rate of the low types, H , which is now endogenous to the model,

$$H(N_l) = [(N_l^* - N_l) / N_l^*] \quad (13)$$

$$T(H(N_l)) = c \cdot H \quad (12)$$

Hence, the expected utility coming to the low type agents from the contract is

$$E[U_l] = P_l \cdot (w) \cdot r + (1 - P_l) \cdot (w - T) \cdot r$$

In this framework, the participation constraint on the low types, equation (6) below, can be designed in such a way that the utility level coming to this type of agents from accepting the contract must be greater than the utility which would come from accepting

the contract and shirking, equation (9).

$$U_H = (w + I - T) r \quad (9)$$

$$E[U_L] \geq U_H \quad (6)$$

Hence, we no longer have the incentive compatibility constraint we had in the previous version of the model. That is, this constraint tells us that the utility offered by the contract, which provides the agent with an efficiency wage, must be greater than or equal to the utility this agent would get from accepting the contract and shirking, in other words, this participation constraint works as a moral hazard, or incentive compatibility, constraint.

2. w_i -high types- franchise contract

We now assume that the highly skilled workers have an upward sloping supply schedule (Sh in Figure A),

$$U_{rh} = b \cdot N_h \quad (8)$$

the expected utility coming from the contract is

$$E[U_h] = P_h \cdot (w_g) r + (1 - P_h) \cdot (w_b) r$$

Proposition 2B (principal's side). Demand side. $w^* = (w_b, w)$ is a vector of payment rules which maximises the principal's payoff.

The manufacturer will demand a certain number of workers which, in turn, depends on the demand for the product. Therefore, he will have to decide how many agents to

hire from each group, that is, how many contracts of each type.

In spite of the fact that all the low types would be willing to be employed at the market-clearing wage, the principal will prefer to offer them an efficiency wage (w in Figure A), which will induce him to hire the highest number of agents (Nl in Figure A) compatible with the solution of the moral hazard problem.

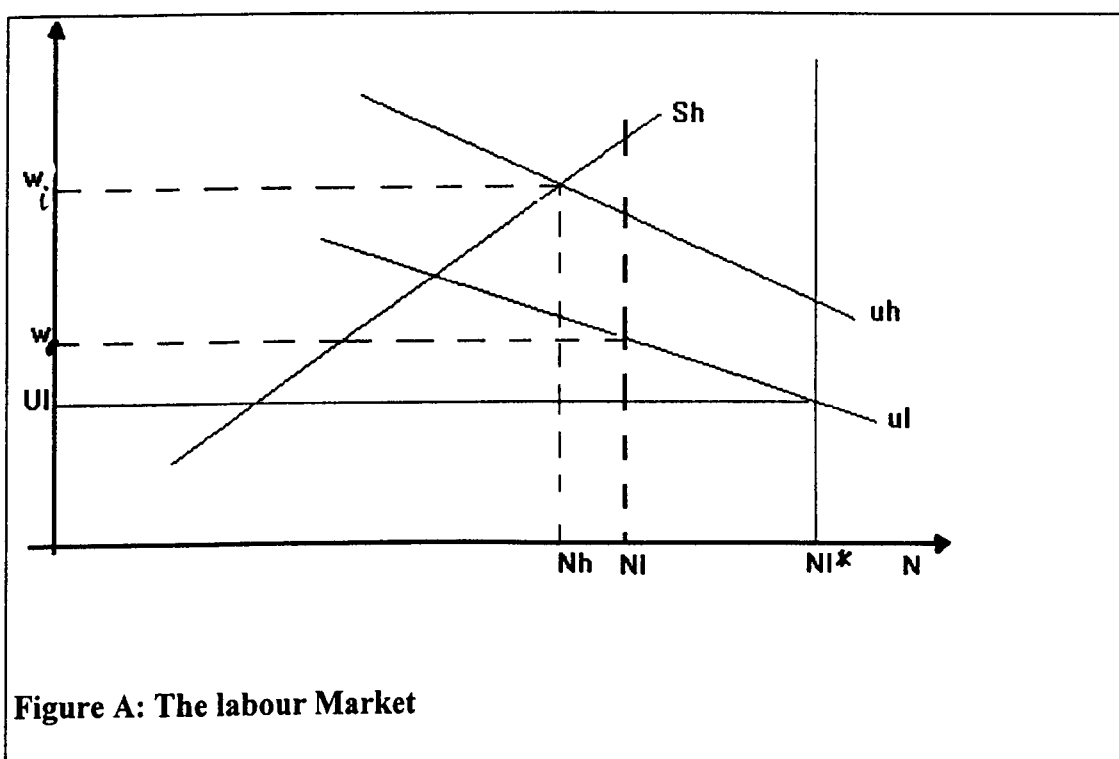


Figure A: The labour Market

where w_i represents the conditions of the share contract, w is the fixed wage at the efficiency level, Sh is the Supply schedule of high types, and Ul is the Supply schedule of low types, uh is the demand for high types, and ul is the demand for low types.

By looking at this diagram we can see how the principal will make his decision about how many agents of each type to hire, in other words, about how many share, franchise, contracts (Nh), and how many fixed-wage, management contracts (Nl) to

offer.

The value of the share contract w_i will be higher than the fixed wage w not only because of the higher productivity of the agents to whom it has been tailored, but also because the principal must provide them with a kind of risk premium. This comes from the fact that the agents are risk averse, and so must be rewarded for the risk that they are bearing.

Hence

$$E[\Pi_l] = P_l \cdot (X_g - w - I) + (1 - P_l) \cdot (X_b - w - I) \quad (4)$$

$$E[\Pi_h] = P_h \cdot (X_g - w_g - I) + (1 - P_h) \cdot (X_b - w_b - I) \quad (5)$$

$$\begin{aligned} w^* = & \underset{w_j, N_j}{\operatorname{argmax}} && E[\Pi] \\ & \text{s.t.} && PC_j \\ & && SS_j \quad j=h,l \end{aligned}$$

$w^* = (w_i, w)$, where $w_l = w$ and $w_h = w_i$, is a vector of payment rules, which satisfy the above constraints. This vector implements the PVI solution. Can this be an equilibrium?

Within this formulation of the model, following the rationale outlined in the previous case of perfect competition, we now look for the existence of an optimal solution by maximising total surplus. This time, however, in order to endogenise the level of unemployment, our objective function is the total level of employment.

$$N = N_h + N_l \quad (14)$$

This implies the maximisation of the firm's profits via the maximisation of the quantity produced, as this depends on the number of agents (see equation (1)), and, at the same time, it corresponds to minimising the level of unemployment of the low types that must be preserved to guarantee the functioning of the incentive mechanism designed⁴⁶. Namely, we look for the maximum level of employment, and thereby of production, which can be attained as a consistent solution of a general equilibrium model⁴⁷.

The complete set up of the model is:

$$\max N \quad (14)$$

$$w_l, N_l, U_{rl}$$

s.t.

$$E[P] = A - N_l \cdot [P_l \cdot Q_g + (1 - P_l) \cdot Q_b] - N_h [P_h \cdot Q_g + (1 - P_h) \cdot Q_b] \quad (1)$$

$$X_g = E[P] \cdot Q_g \quad (2)$$

$$X_b = E[P] \cdot Q_b \quad (3)$$

$$E[Il] \geq 0 \quad (4)$$

$$E[Ih] \geq 0 \quad (5)$$

$$P_l(w) \cdot r + (1 - P_l)(w - T) \cdot r \geq (w + I - T) \cdot r \quad (6)$$

$$P_h(w_g) \cdot r + (1 - P_h)(w_b) \cdot r \geq U_{rh} \quad (7)$$

$$U_{rh} = b \cdot N_h \quad (8)$$

$$U_{rl} = (w + I - T) \cdot r \quad (9)$$

$$P_l(w) \cdot r + (1 - P_l)(w - T) \cdot r \geq P_l(w_g) \cdot r + (1 - P_l)(w_b) \cdot r \quad (10)$$

$$P_h(w_g) \cdot r + (1 - P_h)(w_b) \cdot r \geq P_h(w) \cdot r + (1 - P_h)(w - T) \cdot r \quad (11)$$

$$T(H(N_l)) = c \cdot H \quad (12)$$

$$H(N_l) = [(N_l^* - N_l) / N_l^*] \quad (13)$$

⁴⁶ In this second version of the model, unlike the previous case, the level of unemployment is endogenous. The solution to the following problem will provide a vector of values for the variables which are endogenous to the system, which will generate equilibrium both on the product and on the labour market.

⁴⁷ The program formulated with GAMS for the solution of this model is reported in **Appendix**.

Equations (4) and (5) are the zero profit conditions deriving from the monopolistic competition. Equations (6) and (7) are the Participation Constraints, and equations (10) and (11), finally, are the Self Selection constraints, for the low and high types respectively.

Proof: The solution to the benchmark case

We run this extended model with the Gams software by giving certain values to the exogenous variables. In this first experiment, to which we will refer as the benchmark case, we started our simulation exercise by setting the constant of the demand equation A, which simulates the cycle, equal to 100.

The values given to the parameters of the model are reported in Table 2-6.

Table 2-6

Parameters	values
P_l	0.5
P_h	0.75
I	0.15
Nl^*	40
r	0.5
c	2.5
b	0.2
A	100
Q_r	3.0
Q_b	1.0

Also in this case GAMS results were consistent with the hypotheses of our model. They showed that the optimal (local) solution, which maximises total surplus by maximising the level of employment consistent with the creation of the right incentive and selection mechanism, is given by the contemporaneous adoption of a menu of two contracts (PVI), thus giving rise to a separating equilibrium. These results are reported in Table 2-7 and Table 2-8.

Table 2-7

VARIABLES	Lower	Level	Upper	Marginal
w	0.460	3.279	$+\infty$	0
H	0	0.121	$+\infty$	0
T	0	0.303	$+\infty$	0
U_{rl}	0	2.031	$+\infty$	0
U_{rh}	0	2.238	$+\infty$	0
w_g	0	4.976	$+\infty$	0
w_b	0	1.618	$+\infty$	0
X_g	0	5.144	$+\infty$	0
X_b	0	1.715	$+\infty$	0
N_l	0	35.156	$+\infty$	0
N_h	0	11.190	$+\infty$	0
$E(P)$	0	1.715	$+\infty$	0
N	0	46.345	$+\infty$	0

Table 2-8

EQUATIONS	Lower	Level	Upper	Marginal
(1)	0	0	0	0.350
(2)	0	0	0	0.101
(3)	0	0	0	0.046
(4)	0	0	0	-0.037
(5)	0	0	0	-0.110
(6)	0	0	0	-39.99
(7)	0	0	$+\infty$	-0.630
(8)	0	0	0	-0.630
(9)	0	0	0	0
(10)	0	0	$+\infty$	-0.137
(11)	0	0.188	$+\infty$	0
(12)	0	0	0	4.813
(13)	0	0	0	12.033
(14)	0	0	0	1

The characteristics of this solution are such that the participation constraints on the two types of agents (equations 6 and 7) will both be binding. That is, the contracts offered by the companies will then give to each type of agent exactly his reservation utility in order to ensure his participation⁴⁸.

Empirical support for our assumption that the reservation utility level of the people who choose the management contract, the low productivity types, is lower than that of the agents who choose the franchising contract, the highly productive types (i.e., $U_{rl} < U_{rh}$), is provided by a recent work by Kaufmann and Lafontaine (1994).

⁴⁸Recall that the reservation utility is endogenous to the model, therefore the optimal value provided by the solution to the problem will include the rents earned to the agents.

These authors report that from a survey conducted by the fast-food company McDonald's it transpired that the salary earned by potential franchisees prior to becoming franchisees was about \$48K (1982 dollars), while average store managers' compensation was about \$31K. Analogous results were obtained by our empirical analysis. These are illustrated in part II of this study.

The Self-Selection constraint for the low types (equation 10) is binding, while it is slack for the high types (11). This implies that the agents of the low skilled type will get an efficiency wage which, given their preferences, will leave them as well off as they would be by accepting the franchising contract. At the same time, the highly skilled agents will choose the contract designed for their type, and this will earn them rents. In other words, they will get a higher utility from the franchising contract than that which they would get from accepting the fixed wage contract. This comes from the fact that while making them the last claimants of the profits, the conditions of the contract will partly insure these agents against the risk, not at a high enough level, though, to appeal to the low types. Given the fact that they attach a higher probability to the occurrence of the good state than the low types do, this contract will leave them with a higher utility level than that which they would get from the management contract, and, at the same time, would not give a higher utility to the low types who will not therefore be attracted by this contract.

This result is further supported by Kaufmann and Lafontaine's (1994) findings, which lead them to state that McDonald's desire for a particular type of individual to operate its franchises leads the company to leave rents downstream thereby attracting a larger

number of high quality individuals who are people with high potential earnings. Moreover, they argue, these rents represent an incentive mechanism that complements the use of profit-sharing rights.

The optimal choice of the firms within this framework will then induce them to hire a certain number of low type agents, and offer them an efficiency wage, which implies keeping a certain number of company owned outlets ($N_l = 35.156$) that brings about an equilibrium unemployment rate equal to 0.121, as a proportion of the number of the low productivity types in employment, working as a disciplinary device for this kind of agent. At the same time, there will be a certain number of the outlets which will be franchised to the high types ($N_h = 11.190$).

As we remarked in commenting the results presented in the previous section, the solution obtained constitutes a local optimum given the values of the parameters. These mostly vary with the agents' attitude towards risk, and with the principal's input I . We performed some simulations assuming the agents to be risk neutral, the model proved unfeasible in this instance, thus showing that agents' risk aversion is a necessary condition for contract mixing. This was not the case when we adopted different coefficients of risk aversion for the two types of agents, i.e., the model still proved feasible, and provided an optimal contract mix solution. The principal input I is another key parameter. In fact, outside a certain range of values of I the model became unfeasible. This is especially so when the value of this input which is appropriated by the agent acting opportunistically, is higher than the punishment he is inflicted for his behaviour (T in this model). Evidence on this was obtained by our

survey. In the qualitative analysis presented below we furnish evidence of companies that reverted from PVI to one of the two extremes of the organisational structures spectrum, i.e., either complete vertical separation or complete vertical integration with a change in this variable.

2.5. Changes in Organisational Forms over the Cycle: a Comparative Statics Analysis

Since most of the empirical literature on franchise contracts reports a tendency over time towards a greater adoption of the franchise contract, we try to broaden the analysis in order to capture this essential feature with respect to the optimal form of organisation the firms will choose to adopt over time.

Hence, we perform this study by simulating the cycle within the demand equation of our model and focus our analysis on the response effects to changes in demand over the cycle. In other words, we simulate both a boom and a slump in order to analyse the effects on the set of feasible contracts and see what is the response of the firms in terms of organisational structure.

We perform this task by means of comparative static analysis. That is, we look at what happens in the labour market by looking at how the supply of contracts, i.e., demand

for agents, varies over the cycle (i.e., how many agents are hired within each group). Then, we look at the implications of this labour structure on the organisational (contractual) choice, namely, whether the firms tend to adopt a vertically separated structure as a consequence of supplying more share contracts, or, instead, move towards vertical integration by hiring more low types, i.e., by supplying more fixed wage contracts.

2.5.1. The Boom

According to what was said above, we would expect that when demand goes up and the economy/firm is expanding, the company will resort to the adoption of franchise contracts to achieve higher growth. Therefore, we expect the variable N_h (namely the number of high types who accept the contract, i.e., franchisees) to rise more than the variable N_l (namely, the number of managers of the company retained outlets).

In order to simulate an increasing cycle with a higher demand for the product, we raise the level of the constant in the demand equation A, from 100, as in the benchmark case, to 150. The results of the simulations are presented in Table 2-9 and

Table 2-10.

Table 2-9

VARIABLES	Lower	Level	Upper	Marginal
w	0.460	23.365	$+\infty$	0
H	0	0.120	$+\infty$	0
T	0	0.300	$+\infty$	0
U_{rl}	0	4.921	$+\infty$	0
U_{rh}	0	5.429	$+\infty$	0
w_g	0	34.241	$+\infty$	0
w_b	0	14.250	$+\infty$	0
X_g	0	35.272	$+\infty$	0
X_b	0	11.757	$+\infty$	0
N_l	0	35.193	$+\infty$	0
N_h	0	27.143	$+\infty$	0
$E(P)$	0	11.715	$+\infty$	0
N	0	62.336	$+\infty$	0

Table 2-10

EQUATIONS	Lower	Level	Upper	Marginal
(1)	0	0	0	0.295
(2)	0	0	0	0.086
(3)	0	0	0	0.038
(4)	0	0	0	0.029
(5)	0	0	0	0.094
(6)	0	0	$+\infty$	129.865
(7)	0	0	$+\infty$	1.314
(8)	0	0	0	1.314
(9)	0	0	0	0
(10)	0	0	$+\infty$	0.288
(11)	0	0.500	$+\infty$	0
(12)	0	0	0	6.563
(13)	0	0	0	16.406
(14)	0	0	0	1.000

Consistent with the results we obtained in our benchmark simulation, also in this case the participation constraints on both types and the self selection constraint on the low

types are binding, while the self selection constraint on the high types is slack.

A boom in the cycle induces a higher level of the reservation utility level of both types. This induces an increase in the prices paid to the agents by both contracts. The equilibrium unemployment rate goes down very slightly from 0.121 to 0.120. This result comes from the fact that in order to keep an incentive device on the managers of the company-owned outlets, unemployment rate within this group cannot decrease much.

Therefore, the number of the managers hired goes up very slightly from 35.156 to 35.193. On the contrary, the expansion of the firm is attained via an increased adoption of franchise contracts. In fact the variable N_h goes up from 11.190 to 27.143.

Hence, the results of the model provided by the GAMS solution show that the response of the firm to an increase in demand consists of a larger adoption of incentive contracts, i.e., of expanding by means of franchising instead of vertical integration.

This, first of all, enables the company to expand more rapidly especially into new markets which will benefit from the dynamism of efficient independent agents, and at the same time encourages 'potential entrepreneurs' to enter franchising.

More arguments can explain these findings. We saw that an expansionary phase of the cycle brings unemployment down, thus inducing an increase in the reservation utility level of the low-types. Therefore, as Leibenstein (1966) remarks, company-ownership becomes too costly for ensuring an efficient managerial performance (X-efficiency),

namely, in our case, the efficiency wage becomes too high with respect to franchising. Other evidence in the literature on this point is provided by Shelton (1967), and Krueger (1991).

2.5.2. The Slump

We then simulated a slump in the cycle by lowering the value of A from 100 to 90. The results are illustrated in Table 2-11 and Table 2-12.

Table 2-11

VARIABLES	Lower	Level	Upper	Marginal
w	0.460	1.098	$+\infty$	0
H	0	0.122	$+\infty$	0
T	0	0.306	$+\infty$	0
U_{rl}	0	1.394	$+\infty$	0
U_{rh}	0	1.534	$+\infty$	0
w_R	0	1.800	$+\infty$	0
w_b	0	0.241	$+\infty$	0
X_x	0	1.872	$+\infty$	0
X_b	0	0.624	$+\infty$	0
N_l	0	35.104	$+\infty$	0
N_h	0	7.668	$+\infty$	0
$E(P)$	0	0.624	$+\infty$	0
N	0	42.771	$+\infty$	0

Table 2-12

EQUATIONS	Lower	Level	Upper	Marginal
(1)	0	0	0	0.366
(2)	0	0	0	0.105
(3)	0	0	0	0.051
(4)	0	0	0	-0.047
(5)	0	0	0	-0.109
(6)	0	0	$+\infty$	-25.033
(7)	0	0	$+\infty$	-0.426
(8)	0	0	0	-0.426
(9)	0	0	0	0
(10)	0	0	$+\infty$	-0.091
(11)	0	0.112	$+\infty$	0
(12)	0	0	0	4.289
(13)	0	0	0	10.723
(14)	0	0	0	1.000

The results obtained from the solution of the model in this experiment still provide an optimal solution given by a separating equilibrium, i.e., by the adoption of both contracts.

Also in this case, the two participation constraints are binding, therefore, the agents will accept the contract at their reservation utility levels, which have now reduced consistently as a consequence of the slump. Again, the self-selection constraint on the high types is slack, while the one on the low types is binding, which implies that the high skilled agents still get rents out of the franchise contract with respect to the management contract, even if their value has now decreased. The level of the fixed wage w paid to the low type goes down by a large amount because of the recession that increases the competition and therefore reduces the reservation wage.

Hence, this lower cost of the managers induces the firm to employ a just slightly lower

number of low-type agents, (N_l goes from 35.156 to 35.104). Conversely, the number of franchising contracts offered by the company shrinks dramatically. This is demonstrated by the change in the value of N_h which drops to 7.668 from our benchmark case where it is 11.190. This implies that over a slump the company will not supply more franchise contracts as it would be too costly for it to insure the franchisees against the risk. The efficiency wage will therefore be less costly to the firm, who will therefore resort to the adoption of a more vertically integrated structure⁴⁹.

As Stigler (1951) pointed out in his interpretation of Adam Smith's theorem "The division of labour is limited by the extent of the market", firms tend to start out vertically integrated, then, as demand increases, they vertically disintegrate.

This is so, mainly because of managerial diseconomies, such as the cost arising from a greater need for co-ordination due to the management of dissimilar activities.

However, he argues, this process reverses itself as demand declines, hence, he concludes, vertical separation is the typical nature of development in growing

⁴⁹ One of the main results of dynamic extensions of the efficiency wage model of Shapiro and Stiglitz (1984) is that it can generate hysteresis (Saint-Paul, 1993). Even though this model is of a different type, and is just limited to comparative statics analysis, it shares one of the conclusions reached by Saint-Paul (1993), who shows that even when changes in the employment level are expected, it will have an incentive to stay where it is, i.e. there will be persistent unemployment, "...because deviations from the current value are costly in terms of incentives," (Saint-Paul, 1993, p.2). Analogously to this argument, the results of the simulation analysis performed in this study show that the employment level of the low type workers will tend to be constant presenting a very small variance around the benchmark value 35.156. In contrast with the countercyclicality of the wage level obtained by Saint-Paul, however, and more consistently with empirical evidence, the results of our model show that the wage is procyclical.

industries, while vertical integration will be an outcome in declining industries. Moreover, he reports evidence in this study regarding the decline of vertical integration over time in expanding industries within the manufacturing sector.

If instead of assuming that our constant A varies with the business cycle, we view it as specifically related to the demand for a particular good, and therefore varying with the different stages of the product life-cycle, our results are perfectly consistent with Stigler's. In such a case we would actually expect the franchisees to switch from declining industries to other industries where demand is increasing.

All the above leads us to conclude that PVI will allow a company to face fluctuations in the level of the demand more flexibly. When the market is expanding and demand is increasing, contracting out/growing via a franchise network gives access to extra production (i.e., extra workers) without obliging the firm to pay for underemployed workers and idle capacity over a slump⁵⁰.

⁵⁰The results obtained by this analysis are also consistent with what reported by Stanworth and Dandridge (1994) in their overview of business franchising and economic change. In that work it is reported that, consistent with Lafontaine (1993) findings about US data, franchising is growing at a pace which is consistent with the growth of the economy as a whole. Similar conclusion is reached by research commissioned by the Franchise Association (see Stanworth and Dandridge, 1994, p.12).

2.6. Conclusion

Vertical restraints “between manufacturers and retailers continue to be a source of policy debate,” (Dobson and Waterson, 1996, p.1). Although the considerable recent development of literature on vertical ties has increased the understanding of these contractual arrangements, it does not lead to “straightforward conclusions for public policy,” (ibid.). The general conclusion rejects the ‘Chicago school’ view, according to which vertical restraints should be legal, and argues for the need of more detailed investigation of the relevant issues related to each specific case. This was the approach followed in the analysis presented in this chapter, where we investigated the case of PVI.

More specifically, in this chapter we looked at the design of industrial organisational forms, and, in particular, at the adoption of mixed organisational forms consisting of the contemporaneous adoption of vertical integration and franchising patterns, which, despite being an empirically relevant phenomenon, has not received a coherent explanation from economics research.

We built up a principal-agent model based on uncertainty and information asymmetries capable of providing an explanation for this phenomenon. Moreover, we performed a comparative statics analysis by means of simulations which enabled us to predict how this organisational structure is likely to change in response to expansionary and recessionary phases of the cycle. The results provided by this

exercise enjoy support by empirical studies on the topic. Further evidence favouring these results is provided by the next part of this study.

The standard result of principal-agent problems in the presence of uncertainty, when the principal is risk neutral and the agent is risk averse, provide a first best solution with the principal bearing all the risk and no delegation to the agent. This comes from the fact that when the agent is risk averse, it would be too costly to the principal to insure him against risk.

If brought into our analysis, this would lead us to expect a fully vertically integrated structure being adopted by the firm. The presence of moral hazard and adverse selection in our model, however, causes this to be no longer an optimal organisational form for the company. This is due to the additional costs the firm would incur arising from the lower level of efficiency of the agents, given by their low productivity level, and by their cheating.

Therefore, the optimal solution of this model is given by a separating equilibrium resulting in a PVI organisational form, consisting of the contemporaneous adoption of vertical integration and delegation to independent agents via franchising contracts. That is, the gains in terms of efficiency coming from delegating part of the operations to these independent agents will outweigh the costs coming from having to, partially, risk-insure these agents.

It has actually been reported from many case studies, (see Dnes, 1992a), that franchising is an economical alternative to full forward integration and to dealing with

completely independent retailers. This economy comes not only from this contract removing the moral hazard problem, but also from the alignment of the interests of the company and the retailer, who is now an independent entrepreneur whose wealth is tied up to the brand performance⁵¹.

It might be argued that making a performance related payment to the managers of the company-owned outlets could be an appropriate alternative to franchising. But, as we remarked in this work, this is not the case as this contractual form is a less powerful incentive scheme than delegation via franchise.

Moreover, the solution of our model shows the existence of rents earned by the franchisees. That is, the principal will have to leave these rents downstream in order to ensure the functioning of the self-selection mechanism⁵². This result differs from that showed by Rey and Tirole (1986), in their research on the logic of vertical restraints. These authors argue that in the presence of uncertainty and asymmetric information, vertical (competition reducing) restraints have some drawbacks, e.g., they may give the retailers an inadequate amount of insurance. The existence of contract heterogeneity involving contracts with different degrees of insurance for the retailer, as described by our model, could solve this drawback identified by Rey and Tirole.

⁵¹ The shirking of the managers can also be regarded, instead of paying a low effort, as pursuing personal agendas. As Klein (1991) remarked, "Shareholders' franchise right under the property rights view of the corporation, ensures at least a degree of corporate accountability. The alternative prospect of managers unaccountable to shareholders could result in a corporate oligarchy coupled with the probability of an era of corporate plundering," (Stanford Law Review, p.177).

⁵² See Krueger (1991) for evidence on the existence of efficiency wages within company-owned outlets, and Kaufmann and Lafontaine (1994) for the existence of rents at franchised outlet level.

The adoption of a contract mix in the presence of labour market heterogeneity induces the agents to self-select by maximising their expected utility. This resulted in a 'truth-telling' separating equilibrium.

Finally, this model proves that not only is such organisational structure optimal from the company's point of view, in that it is the most efficient attainable given the existing constraints, but it is optimal also from the point of the agents. In other words, PVI maximises total surplus.

Both EU and US policies make a distinction between *agreements on* and *imposition of* vertical restraints. However, while EU policy sees the agreements as essentially "facilitatory and benign," (Dobson and Waterson, 1996), US policy has a negative approach and regards them as a "sign of concentration", hence potentially harmful.

In our model PVI results from an agreement in that it is the best choice from the manufacturer's point of view as well as from the retailer's. Which leads us to pretend towards the European approach.

This leads us to stress, in unison with a recent report by the OECD (1994), that vertical restraints are not always against consumers' interests and therefore, necessarily "obvious targets for 'trust-busters'". (The Economist, 24.09.94, p.102). On the contrary, they can benefit consumers as well as firms. Even if the franchise agreements guarantee an exclusive territory to the dealer, this does not imply that the retailer is guaranteed monopoly power in the area. While the exclusivity eliminates

intra-brand competition, it does not keep the retailer from inter-brand competition⁵³, and instead, as this model showed, brings about a long run Chamberlinian solution with the firms earning zero profits⁵⁴.

"Contracts with vertical restraints, are often the most efficient way for producers to get their wares to the market. When that is so, consumers stand to gain, through a combination of lower prices, better information and better service" (ibid.). The fundamental problem regarding the industrial antitrust policy to be adopted with respect to franchising derives from the complete absence, or the limited extent of, competition both among producers and among retailers, rather than from the vertical restraints themselves. "Vertical restraints employed by transactors with no market power cannot be anticompetitive," (Klein and Saft, 1988, p.295).

⁵³ Isn't it the case we find a 'Burger King' right across the road from a McDonald's even in remote areas?

⁵⁴ The above concluding remarks derived from the solution of our model, hold true in the case where franchising is the only form of vertical restraint adopted by the principal. The same conclusion does not necessarily apply where additional forms of vertical ties (e.g., Resale Price Maintenance) are imposed by the manufacturer on the retailer. In such instance the principal-agent relationship would be complicated by additional frictions not analysed in our framework. This point was in fact raised by some franchisees who participated to our survey (see next chapter), who lamented the imposition of additional obligations. The investigation of such case is beyond the scope of this research, and remains an interesting path to pursue in future research.

2.7. Appendices

2.7.1. Appendix 2.7-1 GAMS Solution Technique to Non Linear Programming Problems

When GAMS solves non linear programming problems, the solution techniques are particularly complex.

It employs a projected Lagrangean algorithm based on a method due to Robinson (1972)⁵⁵ which involves a sequence of major iterations each of which requires the solution of a linearly constrained subproblem, where each subproblem contains a linearised version of the non linear constraints.

At the start of the k -th major iteration, let x_k be an estimate of the non linear variables, and let λ_k be an estimate of the Lagrangean multipliers associated with the non linear constraints.

Let the problem be of the form:

⁵⁵ See Murtagh and Saunders (1987). "Minos 5.1 User's Guide". Stanford University.

$$\min F(x) + \underline{c}^t x + \underline{d}^t y \quad (1)$$

x, y

subject to:

$$f(x) + A_1 y < \text{or} > \underline{b}_1 \quad (2)$$

$$A_2 x + A_3 y < \text{or} > \underline{b}_2 \quad (3)$$

$$l < \begin{pmatrix} x \\ y \end{pmatrix} < \underline{u} \quad (4)$$

The constraints are linearised by changing $f(x)$ in equation (2) to its linear approximation

$$\tilde{f}(x, x_k) = f(x_k) + J(x_k)(x - x_k)$$

where $J(x_k)$ is the Jacobian matrix evaluated at x_k . The i -th row of the Jacobian is the gradient vector for the i -th non linear constraint function. As for the objective gradient, GAMS calculates the Jacobian using symbolic differentiation.

The subproblem to be solved during the k -th major iteration is:

$$\min F(x) + \underline{c}^T x + \underline{d}^T y - \lambda_k (\bar{f} - f) + 1/2 \rho (\bar{f} - f)^T (\bar{f} - f) \quad (5)$$

x, y

subject to:

$$\bar{f} + A_1 y < \text{or} > \underline{b}_1 \quad (6)$$

$$A_2 x + A_3 y < \text{or} > \underline{b}_2 \quad (7)$$

$$l < \begin{pmatrix} x \\ y \end{pmatrix} < \underline{u} \quad (8)$$

The objective function (5) is called an augmented Lagrangean.

Then, GAMS/MINOS uses the reduced-gradient algorithm to minimise (5) subject to (6) (7) and (8).

2.7.2. Appendix 2.7-2

General Algebraic Modeling System Compilation

VARIABLES

Z Expected profits
V Expected Welfare
PL probability of occurrence of good state for type l
PH probability of occurrence of bad state for type h
W fixed wage
I investment or effort
R coefficient of risk aversion in the crra utility function
H cost derived from losing the job
URL level of reservation utility to type l
URH level of reservation utility to type h
WG piece rate payment to the agent in the good state
WB piece rate payment to the agent in the bad state
XG output level in the good state
XB output level in the bad state;

OBJECTIVE VARIABLE: WELF Expected Social Welfare;

EQUATIONS

PESL Expected profits on low types
PESH Expected profits on high types
MH Incentive constraint on the investment/effort
PCL Participation Constraint for type l
PCH Participation Constraint for type h
ICL Self selection Constraint for type l
ICH Self selection Constraint for type h
WS Average of expected Welfare
OBJ Social Welfare objective function;

$$\text{PESL } Z = E = PL * (XG - W) + (1 - PL) * (XB - W) = 0;$$

$$\text{PESH } Z = E = PH * (XG - WG) + (1 - PH) * (XB - WB) = 0;$$

$$\text{MH } PL * ((W - I)**R) + (1 - PL) * ((W - I - H)**R) = G = ((W - H)**R);$$

$$\text{PCL } PL * ((W - I)**R) + (1 - PL) * ((W - I - H)**R) = E = URL;$$

$$\text{ICL } PL * ((W - I)**R) + (1 - PL) * ((W - I - H)**R) = G = PL * ((WG - I)**R) + (1 - PL) * ((WB - I)**R);$$

$$\text{PCH } PH * ((WG - I)**R) + (1 - PH) * ((WB - I)**R) = E = URH;$$

$$\text{ICH } PH * ((WG - I)**R) + (1 - PH) * ((WB - I)**R) = G = PH * ((W - I)**R) + (1 - PH) * ((W - I - H)**R);$$

WS $V = E = (URL + URH)/2$;

OBJ WELF $= E = V$; MODEL CONTRACT

SOLVE CONTRACT USING NLP MAXIMISING WELF;

2.7.3. Appendix 2.7-3

General Algebraic Modeling System Compilation

PL probability of occurrence of good state for type l
PH probability of occurrence of bad state for type h
W fixed wage
I investment or effort
R coefficient of risk aversion in the crra utility function
H unemployment rate of the low types
T punishment derived from losing the job
UL level of reservation utility of type l
URH level of reservation utility of type h
WG piece rate payment to the agent in the good state
WB piece rate payment to the agent in the bad state
XG expected revenues in the good state
XB expected revenues in the bad state
NLBAR low supply
NL employment low
NH employment high
QG output in good state
QB output in bad state
EP expected price
N total employment
A demand intercept
K coefficient of the punishment func.
B high types supply parameter;

VARIABLES

Z objective;

EQUATIONS

PESL Expected profits form low types
PESH Expected profits from high types
PCL moral hazard and Participation Constraint of low types
PCH Participation Constraint to type h
ICL Incentive Compatibility constraint of type l
ICH Incentive Compatibility constraint of type h
OBJ objective
UTL util of L
XGREV revenues in good state
XBREV revenues in bad state
ELEVEL unemployment cost
HSUPPLY supply of high types

PRICE inverse demand of the good

PUN punishment

TON tot employment;

XGREV.. $XG = E = EP * QG$;

XBREV.. $XB = E = EP * QB$;

ELEVEL.. $H = E = (NLBAR - NL) / NLBAR$;

HSUPPLY.. $URH = E = B * NH$;

PRICE.. $EP = E = A - NL * (PL * QG + (1 - PL) * QB) - NH * (PH * QG + (1 - PH) * QB)$;

TON.. $N = E = (NL + NH)$;

PESL.. $PL * (XG - W - I) + (1 - PL) * (XB - W - I) = E = 0$;

PESH.. $PH * (XG - WG - I) + (1 - PH) * (XB - WB - I) = E = 0$;

PCL.. $PL * ((W + 1) ** R) + (1 - PL) * ((W - T + 1) ** R) = G = ((W - T + 1 + I) ** R)$;

ICH.. $PH * ((WG + 1) ** R) + (1 - PH) * ((WB + 1) ** R) = G = URH$;

ICLPL.. $PL * ((W + 1) ** R) + (1 - PL) * ((W - T + 1) ** R) = G = PL * ((WG + 1) ** R) + (1 - PL) * ((WB + 1) ** R)$;

ICH.. $PH * ((WG + 1) ** R) + (1 - PH) * ((WB + 1) ** R) = G = PH * ((W + 1) ** R) + (1 - PH) * ((W - T + 1) ** R)$;

EX.. $H = L = W$;

UTL.. $UL = E = ((W - T + 1 + I) ** R)$;

PUN.. $T = E = K * H$;

OBJ.. $Z = E = N$;

MODEL CONTRACT/ALL/;

SOLVE CONTRACT USING NLP MAXIMISING Z;

PART II

EMPIRICAL INVESTIGATION

The biggest limit to empirical research on mixed organisational forms is the type of data adopted by most scholars. Since outlet level data are not available, they make use of firm level or even industry level data. These types of data, however, are not very likely to shed light on the organisational decision as they lack information at outlet level which, as we discussed above, is a crucial element to understand the principal-agent contractual choices that result in a particular organisational structure.

The main target of the empirical investigation we are going to present in the following chapters, is to check whether the evidence gathered can serve to verify and enrich the theoretical presumptions deriving from the previous chapter about ‘contractual choice’. Such information will help us to perform a comprehensive exploration and evaluation of the different motivations that lead the two parties of the contractual relationship to their particular choice. Therefore, in order to test the main ideas proposed by the model presented in chapter 2, (e.g., the existence of a self selection mechanism which implements a ‘truth-telling’ separating equilibrium), and to investigate the individuals’ contractual choice within a firm, we needed outlet level

data providing information on the contract, the outlet, and the personal characteristics of the agents, i.e., both the managers of company-owned outlets and the franchisees of the franchised outlets. Since these data are not readily available, we conducted a survey of British firms adopting this mixed organisational structure. The survey was carried out in 1995, by means of postal questionnaires.

The analysis that follows has been realised in three different parts. The first part consists of a qualitative analysis of the responses obtained by the survey. The second part is an econometric study based on the outlet-level data gathered by our questionnaires. Finally, the third part, presents some econometric results from the investigation of company-level data derived from the 'Franchise World Directory, 1994'. We then try to draw the main conclusions deriving from the results of our theoretical study and those obtained by these three analyses into a unitary and coherent framework.

3. Survey: A Qualitative Analysis on Contract Heterogeneity within the Firm

3.1. Introduction

The analysis we are going to present in this section has been carried out in the form of a case study, the reason for that being an attempt to study qualitative data on franchising contractual arrangements. More specifically, we intend to describe some relevant characteristics of the franchise systems investigated by means of the survey we conducted, that cannot be captured by econometrics. In fact, even though this type of data cannot be used for econometric estimations, it provides interesting insights to test for suggested explanations of observed contractual practices⁵⁶. As Dnes (1992a) put it “opportunism, bounded rationality, trust, flexibility and contractual incompleteness are all examples of qualitative aspects of contractual situations,” (p.28).

The aim of this qualitative study is not a purely descriptive one. In fact, the survey was conducted by means of questionnaires designed in such a way as to provide information to investigate the explanatory power of the suggested and established

⁵⁶Case study methodology to examine franchising has already been adopted by various authors (inter alia, Dant, 1995; Dnes, 1992a).

theories. This is by no means the first survey in the area. Dnes (1992a), performed a 'fieldwork-based' study of franchising where he investigated 19 franchise systems in a broad range of industries. However, our study differs from Dnes' in many, fundamental, points. First, Dnes focuses his analysis only on franchising, without investigating any other contractual/organisational alternative available to the firm. Second, his study, although including some investigation on franchisees, concentrates mainly on franchisors; our study, in contrast, does the exact opposite. Third, the analysis performed by Dnes consists exclusively of single chains case studies. Our study starts with a case study including, and comparing, several firms, and then proceeds to a more sophisticated econometric analysis.

Analogously to Dnes, Dant (1995) only performs a case study analysis. His study provides interesting insights into the franchisors' choice but lacks any analysis of the franchisees' side. This study was carried out by means of questionnaires distributed to franchisors at a Franchise meeting. It mainly addresses the fundamental question: 'why do firms choose to expand through franchising as opposed to other competing alternatives?'. This question, although being closely related to the issues addressed by our study, has a different focus, that is, it looks at the possibilities for growth deriving from the franchising choice. Dant finds that operational control and efficiency, market entry, capital access and profits are the most compelling reasons for this contractual choice. More specifically, he finds support for Norton's (1988) hypothesis of bundling of financial and human capital as determining the franchise choice, while he rejects Rubin (1978) thesis that discards the capital provision option as being an explanatory

factor of this contractual choice. Both these propositions, together with other relevant hypotheses, will be investigated both in the qualitative and in the econometric analyses that follow.

The main target of this survey consisted, as we explained above, in collecting data at outlet level⁵⁷. However, in order to analyse the decisions/choices of both the two actors at play in this agency relationship, our survey covered both the agents (franchisees and managers of the company-owned outlets), and the principals (the franchisor/company).

In what follows we start by describing sampling issues (selection and characteristics). We then report on the methodology adopted to formulate the questionnaire. After this general introductory description of the survey, we then proceed to present the results of the qualitative analysis of the responses in two steps:

1. The Franchisors,
2. The Outlets: 2.a Franchisees 2.b Managers.

⁵⁷To the extent of our knowledge, only one survey has been conducted, before ours, on the 'agents side'. It was performed during the 'seventies by Stanworth on three UK franchise chains. As reported by Mendelsohn (1979), this survey showed the importance of 'self-employment' characteristics for the franchisees of the study, in their decision to take up the business. It also concluded that, in addition to other motives like rapid growth with limited capital, one relevant reason for a company to adopt franchising is that this has a lot to offer in having to serve geographically dispersed markets with the problems this involves, like communication, motivation and labour selection.

3.2. The Sample

The firms who were sent the questionnaire were randomly drawn from all the companies listed in the Franchise World Directory 1994, which is an annual directory published by the British Franchise Association listing all the members in that particular year, the number of franchised and company-owned outlets, the year when the company was established and the year when it started franchising, the franchise fee and the royalty rate, the total investment cost and working capital requirement, typical outlet projected turnover and projected profits, period of initial contract, renewal period and the areas of availability⁵⁸. Among these companies we decided to mail the questionnaire to several chains operating in different business categories, so as to have a sample representing all the main sectoral characteristics. However, in order to avoid a possible bias in the representativeness of our sample, the proportions of chains investigated per each sector was made approximately correspondent to the population distribution derived from the Franchise Directory. Roughly speaking these sectors can be grouped into three large categories according to their typology:

1. Services (building, cleaning, business, vehicle);
2. Restaurants, Catering and Hotels;
3. Retailing, Distribution and Wholesale Vending.

⁵⁸ These information, however, are not always complete. Furthermore, they are not provided for all the companies listed.

The Franchise Directory actually reports a more detailed separation of categories of sectors. Nevertheless, we decided to proceed to the above grouping on the basis of the sectoral characteristics represented by the type of activity performed by the principal upstream and by the agent downstream, which would, therefore, present analogous characteristics in terms of moral hazard and adverse selection issues.

In fact, the importance of value added downstream is stronger in the services sector, it is then quite strong in the second group, restaurants, catering and hotels, while it is of relative minor importance in the distribution, retailing and wholesale vending sector. Since, according to the theory presented above, the more labour intensive the process downstream, the stronger will be the case for moral hazard and adverse selection in those sectors, we intended to investigate how this would reflect in the organisational forms adopted by the firms pertaining to these three main sectoral groups.

Moreover, one additional factor to be taken into account is the degree of 'sunkness' of the initial investment made by the franchisee downstream. Actually, as noted by some researchers (inter alia, Klein, 1980, Williamson, 1985, Dnes, 1992a and b), this can play the role of a hostage-bond that the agent posts on his performance. This commitment (investment) would be an additional disciplinary device on the franchisee. However, where the initial commitment on the franchisees' side is quite low, and/or it is sunk only to a very limited extent, a stronger importance of labour input downstream might not be necessarily associated with more franchising. It is of extreme importance to disentangle, and evaluate the magnitude of these two factors in that in some cases/sectors, one might offset the other, thus reverting the first best

organisational structure to one or the other extreme of the range of the contractual/organisational options (i.e., vertical integration or complete delegation).

Since our main scope was to obtain information at outlet level, we intended to mail the questionnaire to all the outlets (i.e., to all the franchised and company-owned outlets) of the investigated chain. The total number of questionnaires sent to the outlets was 376, this was determined by research funds constraints. The number of companies/franchisors investigated, was therefore determined endogenously, that is, these 376 outlets pertained to 23 different chains. Hence, we sent the questionnaire to 23 companies. In Table 3-1 below, we report the characteristics of the sample and of the respondents.

Table 3-1

	<i>Companies</i>		<i>Outlets</i>			
<i>Business Category</i>	<i>Sample</i>	<i>Responses</i>	<i>Sample*</i>	<i>Responses</i>		
			Total Number of outlets	Total Number of outlets	Number of C/O outlets	Num. Franchised outlets
1. Services (building, cleaning, business, vehicle)	8	3	76	11	0	11
2. Restaurants, Catering, Hotels	7	2	115	16	5	11
3. Retailing, Distribution, Wholesale vending	8	2	185	19	7	12
TOTAL	23	7	376	46	12	34

Legend: C/O=company-owned.

* Since the Franchise Directory did not report for all companies the distribution of the outlets, between company-owned and franchised, we did not have this information a priori.

The presence, however, of some bias in our selection of the sample could not, initially, be ruled out since the companies included in the sample all adopted either a mix of contracts or only franchise contracts. In other words, we did not have in our sample any companies that had opted for the other extreme of the contractual range, i.e., that only adopted company ownership. This is clearly due to the fact that the 'Franchise Directory' does not list any such companies.

The risk of sample selection however, was greatly reduced by the fact that (as we will

discuss in deeper details in the section on the franchisor's survey) among the respondents there were some companies that had decided to give up on the franchise option, and had reverted their chains into wholly integrated companies. Actually, to the best of our knowledge, this is the only survey in this field of research that includes the other end of the spectrum of organisational options, i.e., completely vertically integrated companies. This is of extreme importance in that it allows us to test the hypotheses set out by the previous part of this work. In other words, it allows us to check whether, given certain conditions, as derived from the analysis performed above, the PVI will turn out to be the 'optimal' choice.

3.3. *The Questionnaire*

The questionnaire was carefully constructed by making use of the questionnaire design methodology developed throughout the social sciences (inter alia Hague, 1993, Oppenheim and Naftali, 1992, Denscombe, 1992, and Converse and McDonnel, 1987). In order to make data gathering as complete as possible, these authors suggest to simplify the questions as much as possible so as to maximise the response rate. We adopted the funnelling technique, which suggests starting off by asking very broad and generic questions, and slowly getting into deeper details, trying to leave to the end more specific and confidential questions.

Another technique adopted was the closed questions one. That is, we provided several alternative potential answers and asked the respondents to ~~thick~~ pick the one which would be appropriate in their case, but always left the possibility of providing unprompted, open-ended responses.

Several questions were provided with scaled potential answers. Such scale consisted of a five points Likert-type scale, which is commonplace and generally accepted in social sciences investigations. These questions were formulated in such a way as to investigate the relative importance of different factors affecting the contractual choice and the available alternatives. They were scaled from 1. extremely important/relevant, to 5. non important/relevant. Getting an insight on the ordering of the different reasons for the individual to choose such type of contract is of extreme importance to verify the hypotheses suggested by this work (this will then be further tested in a hierarchical discrete choice econometric model, see following chapter).

The general problem due to the adoption of scaled questions is that they only allow for a restricted range of responses. We overcame this problem leaving to the respondent, also in this case, the possibility to provide a different answer from those suggested by the question. Great care was taken in the formulation of the questions so as not to bias the answers in any way.

Three different questionnaires were designed (the specimen of the questionnaires are reported in the appendix to the chapter). One for the franchisor/company (see Appendix 3.6-1), one for the franchisees (see Appendix 3.6-2), and one for the managers of the company-owned outlets (see Appendix 3.6-3). These last two

questionnaires also included a questionnaire on the outlet (see Appendix 3.6-4) in order to explore the physical characteristics of the outlets, and obtain data to test the main hypothesis suggested by the literature of a correspondence between outlets and contractual heterogeneity .

The literature on surveys suggests, before sending out all the questionnaires, to make a test of the questionnaire designed by means of a pilot survey, in order to check that the questions are easily and correctly understood by the respondents, and that there are no questions which are bound to be left unanswered.

We chose a subsample of 10 companies and 80 outlets on which to test our questionnaire. The replies suggested that our questionnaires did not need major changes but just minor refinements.

We then proceeded to a slight revision of the questionnaire as suggested by the results of the pilot survey. The total final number of outlets that were sent the questionnaire was therefore 376⁵⁹. Most part of the completed questionnaires were received back in approximately one week- ten days. About two weeks after having sent the questionnaire, we followed up with 'reminder phone-calls'. We contacted by telephone the firms that had not responded by that date enquiring whether they had received the questionnaire, and, in case they had, if there were any special reasons that kept them from replying. In few cases it actually turned out that the firm had gone out

⁵⁹This figure includes also the number of pilot questionnaires sent, since, due to the fact that we did not need to make any changes apart from some minor refinements, they were extremely similar and enabled us to use their responses together with those of the main survey.

of business, or that it had changed address. Some claimed not having received the questionnaire, in these cases, as in the cases of change of address where a new address had been provided, we sent another copy of the questionnaire. The response rate in this second round was extremely low, thus showing that actually those firms that had not responded in first place were not intending to take part to the study anyway.

3.4. *The Franchisors Survey*

Each of the 23 companies/franchisors was contacted by a personal letter explaining the type of research being conducted and requesting his/her cooperation by completing the questionnaire. A sample of the letter together with the questionnaire specimen is reported in Appendix 3.6-1.

The small number of companies investigated in this part of the survey is mainly due to the fact that we intended to obtain some precise and limited information from the upstream companies, since the main object of our data-gathering exercise are the outlets. Hence, with this first part of the survey, as we show in the analysis of the responses, we mainly tried to investigate the type of organisational form adopted by the firm, and the motivations for its particular choice; its advantages with respect to the possible alternatives, and the extent of success/problems related to this contractual

choice.

3.4.1. The Respondents

Of the 23 questionnaires sent to the headquarters of the companies included in the sample, we received the following responses:

- 7 fully completed questionnaires. The sectoral characteristics of these firms are reported in Table 3-1 above. Since we guaranteed confidentiality, we cannot disclose the names of the firms that responded. Hence, we attach a code to each of them as follows: the number corresponds to the category as reported above, i.e.,

Table 3-2

<i>Code</i>	<i>Category</i>
1	'services'
2	'restaurants, hotels and catering'
3	'retailing and distribution'

the letter following the number, then, identifies the company.

- 2 (from category 2) sent an information brochure;
- 1 was no longer trading (from category 1, more specifically cleaning services);
- 2 (from category 3) had been bought by different companies and had not restarted operating yet;

- 1 company sent back the questionnaire not entirely completed, and unfortunately could not be included among the respondents;
- 10 did not reply even after our reminder phone-calls. Most of them said they could not reply for confidentiality reasons.

Being based only on seven cases, the conclusions deriving from the analysis that follows cannot be generalised, i.e., they certainly cannot be regarded as being representative of the entire population. Nevertheless, they can shed light on some of the issues we are investigating here.

As we said above, the fact that these seven respondent companies who are split quite evenly among the three possible organisational forms: 2 only franchise, 3 mixed and 2 (1 already, 1 about to) only company-owned, makes this analysis rather interesting since, as said above, this is the first survey on this topic that includes also companies that adopt only company-ownership, (see Dant, 1995, who states the presence of sample-selection bias in his as in other surveys, because no other cases but franchise companies are included in the sample).

However, cleaning services are over-represented among the respondents in the services sector. This is due to the fact that these firms, as we are going to illustrate below, experienced strong problems in their relationship with the franchisees, which provided them with a stronger motivation to respond than other firms which probably did not have analogous experiences.

3.4.2. The Questionnaire and the Responses

The questions included in the questionnaire referenced all the arguments identified by the literature and by our propositions, as presented in the first part of this work. They were grouped into two main sections of the questionnaire: the first section, seeking information on the company, and the second investigating the contractual arrangements.

According to Oxenfeldt and Kelly (1969), along with the capital shortage hypothesis, (see chapter one), franchising is advantageous for a franchisor in the infancy and adolescence of the enterprise because it is a way to obtain capital to expand, and knowledge of local market conditions. Then, once the system is fully launched (and the franchisor gets known on the capital markets), he buys back the franchisee operated units in order to own and operate them directly. Martin, 1988, showed that the above argument might be valid in the short run, but that in the long run credit market conditions do not influence the organisational choice. Analogously, many other works found the above theory not consistent. Nevertheless, in some cases (Lafontaine, 1992), this argument was still found significant.

According to a life-cycle study of franchising conducted by Martin, 1988, instead, franchising does not represent a temporary phase on the path to complete ownership integration. On the contrary, it can be regarded as a long-run market solution to risk-sharing and monitoring problems. The findings of this study, in fact, reveal that the proportion of company-owned outlets declines in the long-run. This study, however, as all other studies on the topic, is based on a sample which does not include firms

that in the meantime had decided to abandon the franchise option and to revert to complete vertical integration.

Conversely, according to the hypothesis formulated in the previous chapter, we expect that, unlike the prediction of the life-cycle hypothesis, the 'age' of the company will not directly affect its organisational choice. In that chapter we found that (consistent with what found by Stigler, 1951) the organisational structure adopted by a firm changes in response to changes in the state of demand. Unfortunately, the information we obtained from our survey did not provide us with time series data to test this theoretical result.

Nevertheless, an indirect effect of the age variable on the contractual can be envisaged. A more established company can be assumed to have a stronger, and more valuable, 'brand name', and therefore to be able to attract more potential franchisees. First, because it will involve higher expected returns to the franchising, and second because of a reputation effect, that is, it will be less likely to indulge in opportunistic behaviour.

The first four questions of the questionnaire were meant to gather evidence on this point.

AGE

- Q.1** In what year did your company start?
- Q.2** In what year did your company start franchising?

Table 3-3

		1.A	1.B	1.C	2.A	2.B	3.A	3.B
Year Started the Company		1981	1990	1987	1981	1981	1987	1980
Year	Started	1981	1994	1990	1987	1987	1987	1989
Franchising								

The fact that some companies start franchising at a later stage provides clear evidence against the capital constraint hypothesis. This is even more so if we consider that, as the respondents declared, the only two cases of contemporaneous start 3.A and 1.A were companies already in operation when they were acquired by the present owners.

This suggests that before starting franchising, the company must get some establishment on the market. This establishment, as we illustrate below, increases the probability that ‘high skilled’ potential agents will be willing to participate to the franchise contract.

STRUCTURE

Q.3 How many franchised and company-owned outlets have you had on average since then?

Table 3-4

	1.A		1.B		1.C		2.A		2.B		3.A		3.B	
	C/O	Fr.	C/O	Fr.	C/O	Fr.	C/O	Fr.	C/O	Fr.	C/O	Fr.	C/O	Fr.
1980-1984	1	4					X		1	0			X	
1985-1989	1	8			2	0	X	X	1	4	1	8	X	
1990-1994	1	15	2	2	1	18	2	3	1	8	1	15	0	25
1995	10	1	3	0	0	33	2	4	1	8	1	17	0	52

Legend: C/O= Company-Owned, Fr.= Franchised. X corresponds to a time interval when the company was in operation but for which it did not provide any information about its structure.

The time intervals included in the questionnaire included also the interval 1975-1979, this has not been included in the table above since none of the respondents was in operation at that time.

1.A sent us a letter in which they explained to us that they had no intention of continuing franchising, therefore they were about to dismiss this last franchised outlet remaining in their chain. For this reason, henceforth we regard this company as wholly integrated. This company represents a peculiar case, in that they suffered a very strong moral hazard problem. This was also the case for 1.B.

1.C, conversely, reversed from a mixed structure to a solely franchise system.

Although the restricted number of the respondent companies cannot be the ground for a reliable generalisation of the results to the entire population, it gives some information on the direction of the main dynamics underlying the phenomenon.

The information reported in the table above shows a lot of dynamism in the organisational structures adopted by the investigated firms, unlike in the contract terms (see below), as found by Lafontaine and Shaw, 1996. This dynamism, apart from the two particular cases of the cleaning companies which faced strong moral hazard problems, and therefore reverted from a mixed to an integrated structure, is reported on the franchised outlets, whose number is growing over time, rather than in the number of company-owned outlets.

This compares favourably with the predictions deriving from the model presented in the previous chapter, where we predicted, that as firms grow, they tend to make larger use of delegation, however, as demand falls, they tend to switch back to a vertically integrated structure. Unfortunately these data cannot enable us to test the last part of this statement.

Q.4 What was the average turnover of these outlets (both company-owned and franchised) over the following time periods?

Only one of the respondents provided these information. All the other companies seemed to be very reluctant to reveal financial data, therefore it was not possible to compare the financial performance of the two types of outlets, and make any inference on their relative efficiency.

THE CONTRACT

The following questions, from 5 to 16 aimed at investigating the contractual choice and at delving deeper into the motivation of such choice.

Q.5 Do you have specific written contracts with your franchisees?

All companies report to have written contracts with their franchisees, unlike with company managers. The clear risk of opportunistic behaviour on both sides makes the adoption of a written contract an inevitable choice.

CONTRACT MIX

Q.6 Have you got both company-owned and franchised outlets?

Q.7 Why do you retain the ownership of some outlets?

Table 3-5

Company	Contract type	Motivation
1.A	Both (Only C/O)*	Control. Managers do not cheat on royalties.
1.B	Only C/O	To control the business more closely.
1.C	Only Franchise	Concentration on being a franchisor.
2.A	Both	Commitment.
2.B	Both	C/O outlets act as a template, as a benchmark, for franchisees to replicate. They are also used to test new ideas.
3.A	Both	High sunk costs for franchisees. Not easy to franchise.
3.B	Only Franchise	Concentration on being a franchisor.

* See above for explanation as why we regard this company as wholly ‘vertically integrated’.

Legend: C/O=company-owned.

The information provided by 3.A on the motivation for choosing this contractual mix

shows that there is a binding financial constraint on the franchisees rather than on the company, as suggested by the capital shortage hypothesis. In fact, this results also from the econometric estimations performed on the outlet level data collected by our survey (see following chapter).

Apparently there are not many common patterns in the choice of the organisational form, this is especially so for companies adopting a mix of both contracts. Only in the case of companies adopting only one contractual form did we obtain the same answer. In the case of franchising, for example, apparently, these firms prefer to concentrate only on one type of contract as they would probably have to face diseconomies from the adoption of a contract mix.

If, as explained above we regard '1.A' as a company adopting only company-owned outlets, then a common pattern arises also at the other extreme of the contract range. Both companies that adopt only company ownership pertain to the same sectoral category, i.e. cleaning services, hence, they face the same sort of constraints and, therefore, their organisational choice is determined by similar motivations⁶⁰. These two cleaning companies, 1.A and 1.B, both reverted from a mixed to a completely vertically integrated structure. This was a result of a strong problem of cheating on fees from franchisees. As it will be clear from the analysis of the responses that

⁶⁰A more detailed analysis of the motivation is reported in questions 15 to 17.

follows, the initial investment of the franchisee in this subsector is very small, and, most important, it is sunk only to a very limited extent⁶¹.

As we showed in the model presented in the previous part of this work, the ‘contract-mix’ solution is a local equilibrium given certain values of the parameters. More specifically, the simulation analysis revealed that the separating equilibrium arises for certain ranges of values of the parameters, e.g., initial investment. If we interpret the case of these two companies in the light of the above results, considering that this operation does not require a ‘high value’ human capital, hence the screening motive is not very strong, we are led to think that the incentives provided by the franchise contract do not outweigh the gains that accrue to the franchisees from cheating. In other words, in this sector it is not possible to design an incentive compatible franchise contract. This is due to the fact that the sunk-cost penalties of specific investment are very low, because of the small size of the initial investment. This in turn implies that there is no hostage function, hence no disciplinary device, in such a sector where the incentive to cheat on the franchisees’ side is certainly very high, also considering the difficulty of monitoring such operation.

⁶¹Cleaning equipment can certainly have a very high salvage value. Furthermore, since it is not very strictly linked to the brand ‘image’, as would be for example all the assets at a McDonald’s outlet, this makes it very likely for such problems to arise in this sector. Our prediction would be that a mixed structure is not the first best for the cleaning services sector, and we would expect all the companies pertaining to this sector that adopting franchising to stop operations or turn to the vertical integration solution. Indeed, among the replies we received, the one company that responded saying it had stopped operation and could therefore not complete the questionnaire was another cleaning company. Furthermore, as resulted from the letter 1.A sent us, they said they had just acquired the company from its previous owners, which explained why they had initially a number of franchised outlets, and, this, in turn, most likely explains why this company was sold by the previous owners.

2.B reports on keeping the ownership of some units to use them as a benchmark for franchisees to conform to, and as a way to test new ideas/products. Gallini and Lutz (1992) suggested that contract mixing, or, as they defined it, 'dual distribution', particularly in the case of 'new products', can be explained by signalling motives, that is, by the willingness of the principal to signal to potential franchisees the validity of the new idea/product by investing himself into it by means of company owned outlets. From what 2.B stated, however, it looks as if, rather than a signalling purpose, the company-owned outlets are a testing ground controlled by the company before the launch of a new product. However, the two motivations can be consistent. This is more consistent, though, with the idea we presented in the previous chapter that the franchise is a semi-independent business option for the franchisees. We argued there that it actually saves them the costs of building a name in the market, and, from what is reported here, it seems to save the 'potential entrepreneurs' also the costs of experimenting with new products.

CONTRACT FORM

Q.8 Is there one standard contractual form for all the franchisees?

All companies reported to have standard, written, contractual agreement with their franchisees. The adoption of standard contracts supports very recent findings by Lafontaine and Shaw (1996), who also highlight the stability of these contract terms over time. At the same time the fact that there are no exceptions to the adoption of written documents shows that the potential for opportunistic behaviour on both sides, leads the two parties to make use of written agreements.

Q.9 Do you have formal contracts with the general managers of the outlets owned by the company?

Unlike the contracts with franchisees, which are always written documents, the relationship with the managers does not always take the form of a written agreement. This might actually suggest that the moral hazard problem in this relationship is less stringent than it is in the relationship with a semi-independent agent, the franchisee. However, this conclusion has to be revised in the light of the answers that were given to question 17 below, where all the companies declared that managers are easier to lay off. In other words, this might suggest, as we assumed in our model, that the principal holds the bargaining power in this relationship, hence, the absence of a written contract makes it easier for the principal to lay off the manager. This clearly suggests that in this type of relationship the principal retains more bargaining power than he does in the franchise relationship. Consistent with our theoretical model, this might also imply that the lay-off is a disciplinary device on the managers at company-owned outlets. Among the seven firms of our sample, only two of the five companies that have company-owned outlets have written contracts with their managers (3.A and 1.A), while the remaining three (2.A, 1.B and 2.B) do not adopt written agreements.

CONTRACT (ORGANISATIONAL) DYNAMICS

The questions that follow aimed at testing the presence of franchisor's opportunistic behaviour, which would consist in the franchisor buying back the franchise outlets once the sunk investment is made by the franchisee. In our analysis above, we ruled out this case because of reputation motives for the franchisor. Klein (1980)

has already pointed out this would not be a rational behaviour. In fact, from the answers provided we could not infer any opportunistic behaviour from the principal. However, this point will be more widely investigated in the analysis of the franchisees responses.

Q.10 How many contracts did you renew on average at the expiry date?

Q.11 How many outlets did you terminate on average at the expiry of the contract?

Q.12 Were they:

* Discontinued, * Bought back from the franchisee to be operated by the company, * Transferred from company-ownership to franchising, *Sold to a different franchisee, *The manager was changed.

Since most companies are quite young, and the duration of the franchise contract is generally between ten and fifteen years, for some of them, namely 3.B, 2A, 1.B and 1.C, the contracts had not expired yet. 3.A and 2.B, whose contract is for ten years, had renewed all the franchise contracts expired.

1.A terminated eleven franchised outlets which were bought back to be company operated. Company-owned outlets, obviously, do not have a contractual expiry date.

Q.13 How many contracts did you terminate before their expiry date?

Q.14 Were they:

* Discontinued, * Bought back from the franchisee to be operated by the company, * Transferred from company-ownership to franchising, *Sold to a different franchisee, *The manager was changed.

Table 3-6

	1.A	1.B	1.C	2.A	2.B	3.A	3.B
Contracts terminated before expiry	3	2	2	1	2	0	0
They were	Discont.ed	1 Bought back to c/o 1 Discont.ed	1 Discont.ed 1 Sold to a new fran.see	Bought back to c/o	Discont.ed	-	-

Legend. Discont.ed= Discontinued. c/o= company-ownership. fran.see= franchisee.

The cases of contract termination before the expiry date do not seem to provide any support to the hypothesis of franchisor opportunistic behaviour since only two outlets were bought back by the franchisor. One outlet was bought back by 1.B, however, this is explained by the company's decision of terminating all franchise operations because of a strong franchisee moral hazard problem. The case of 2.A cannot be assessed in any conclusive way.

Moreover, the pattern followed by the acquisition to company ownership of franchised units as reported from the responses to questions 10-14, does not seem to provide any evidence in favour of the life-cycle hypothesis as proposed by Oxenfeldt and Kelly, (1969).

MOTIVATION FOR THE SPECIFIC ORGANISATIONAL/CONTRACTUAL FORM

The following questions were designed in such a way to explore the validity of the literature hypotheses, and of the new hypotheses proposed in this study about the advantages associated with this contractual choice.

On a 5 point Lykert-type scale, from extremely important to not important, the firms investigated were asked to rate the importance of several possible reasons for their particular contractual choice.

In some of the questions that follow, 1.A is not included among the respondents as they did not answer them since they inherited, hence did not choose, a mixed structure.

Q.15 Please rate the reasons why you decided to adopt franchising

Table 3-7⁶²

	Mean	Median	Standard Dev.n	Min	Max
Q.15					
* Higher profitability	3	3	0	3	3
* To raise capital	4	5	1.414214	2	5
* Faster expansion	2.8	2	2.04939	1	5
* Sharing the financial risk	3.8	5	1.788854	1	5
Legend: Range goes from 1=extremely important, to 5= not important.					

Other reasons reported by the companies in the last (open end) part of the question: the 'Other' option, were:

⁶² Since we are dealing with ordinal scale data, the appropriate measure of central tendency is the median.

- Was already a franchise system when acquired by the present owners. (1.A). This actually explains the fact that the company did not find appropriate the organisational structure it inherited, and therefore, after experiencing serious problems, decided to revert to complete company-ownership.
- Easier to manage, (2.A).
- Motivated owners, secure commitment to the business, (2.B).

The answers provided to the question above seem to reveal that there are not many common opinions, apart for the first option where all agreed that profitability is higher, but is not of extreme relevance to the franchise choice. The capital shortage hypothesis did not receive support. Some support is provided to the argument proposed by Norton (1988), according to which franchising enables a firm to grow faster. Norton explained this because of the bundling of human and financial capital involved in the franchise option. We will show here that while this is true for the case of human capital, it is not true for the latter. The standard deviation related to this option, however, is quite high⁶³.

⁶³The variance range generally accepted in social sciences from five point scales is up to 2.0 (see Churchill, 1991)

Q.16 What are the relative strengths of franchisees as compared to general managers in case of company-ownership?

Table 3-8

	Mean	Median	Standard Dev.n	Min	Max
Q.16					
* Better skills	3.166667	3	0.408248	3	4
* More committed	1.666667	1	1.632993	1	5
than managers					
* Care more about	1.833333	1	1.602082	1	5
the quality of the					
product/ service					
delivered to the					
customers					
* Provision of	1.833333	1	1.602082	1	5
capital					
* Easier to terminate	4	4	1.095445	3	5
the contract in case					
of bad performance					
Legend: Range goes from 1=extremely important, to 5= not important.					

Since the answers provided by 1.B, one of the two cleaning companies that experienced problems were completely different from the others, hence changing all the results reported in the table above, we decided to report in a second table the answers provided by all the other companies but 1.B.

Table 3-9 bis

	Mean	Median	Standard Dev.n	Min	Max
Q.16 without 1.B					
* Better skills	3.25	3	0.5	3	4
* More committed than managers	1	1	0	1	1
* Care more about the quality of the product/ service delivered to the customers	1	1	0	1	1
* Provision of capital	1.25	1	0.5	1	2
* Easier to terminate the contract in case of bad performance	4	4	1.154701	3	5
Legend: Range goes from 1=extremely important, to 5= not important.					

Once excluded the case of 1.B, there were considerable similarities in the opinion of the respondents in terms of advantages of franchisees as opposed to managers to run the outlets of their chains. By far the mostly agreed points, as we suggested above, were both the importance of commitment and effort expended by the franchisees. Most of the respondents agreed that it is advantageous that franchisees provide finance, with respect to managers, however, recall that, as they declared above, this was not amongst the most important reasons for which they decided to adopt franchising.

Q.17 What are the relative strengths of general managers in the case of company-ownership as compared to franchisees?

Table 3-10

	Mean	Median	Standard Dev.n	Min	Max
Q.17					
* Better skills	4	4	1.095701	3	5
* More committed than franchisees	3.333333	3	0.57735	3	4
* Care more about the quality of the product/ service delivered to the customers	3.333333	3	0.57735	3	4
* Higher reliability as they are part of the company	2	2	1	1	3
* Easier to lay off in case of bad performance	1.666667	1	1.154701	1	3
Legend: Range goes from 1=extremely important, to 5= not important.					

The most relevant point in this table, as we discussed already above, seems the general idea that managers are easier to lay off in case of bad performance.

FINANCIAL ARRANGEMENTS

Initial Investment

Q.18 Is the initial investment for the franchised outlets made by Franchisor [] Franchisee []

Q.19 Is it the same for all the franchised outlets?

[] Yes: What is the amount? *Franchisor: [] *Franchisee: []

[] No: What is the range? *Franchisor: [] *Franchisee: []

What makes it differ?

Table 3-11 Initial Investment in UK pounds.

	1.A	1.B	1.C	2.A	2.B	3.A	3.B
Franchisor	0	0	0	0	5.000	0	0
Franchisee	9.500	7.500	20.000- 40.000	80.000	15.000	30.000	20.000

1.C is the only company that allows a range of different investment levels depending on the size of the outlet. It is interesting to note that only in one case does the principal take part in the investment of the agent downstream. In all other cases but one, the investment is a fixed sum provided by the franchisee.

As we remarked above because of the implications in terms of 'bond-posting', the size of the initial investment in the two cleaning companies is quite low.

Q.20 Is the franchise fee required the same for all the franchised outlets?

Yes: How much is it?

No: What is the range?

What makes it differ?

Table 3-12

	1.A	1.B	1.C	2.A	2.B	3.A	3.B
Franchise Fee in UK pounds	3.000	2.500	7.000- 15.000	6.000	10.000	13.000	11.930

1.C is the only company that allows a range of franchise fees depending on the size and location of the outlet.

1.A, as well as 1.B, have an extremely low franchise fee, this, coupled with the fact that the initial investment is quite low as well, and not sunk (cleaning equipment has a

salvage value extremely close to its real value), and with the fact that it is an operation extremely difficult to monitor, implies that the commitment on the franchisee's side is very low, thereby inducing a strong franchisee moral hazard problem. These sectoral characteristics make the mixed system not optimal any longer. Eventually, we would expect companies pertaining to this category to revert to a vertically integrated organisational structure.

Q.21 Does the royalty rate differ among the outlets?

No: How much is it?

Yes: What is the range? What makes it differ?

Table 3-13

	1.A	1.B	1.C	2.A	2.B	3.A	3.B
Royalty Rate	7%	Sliding scale	6%-12%	5%	15%	7.5%	0
Advertising fee	0	0	0	0	0	2.5%	0

Perhaps the existence of a sliding scale for 1.B is an additional incentive for its franchisees to under-report the turnover in order to cheat on royalties. Again, in the case of 1.C the size and location of the outlets make the contract terms vary. For all the other firms the royalty rate does not vary across outlets.

Q.22 What has been the average annual pay of the general managers in charge of a company-retained outlet since you started?

On average it varies between 7.500 and 17.500. Unfortunately, these data are too

limited to allow us to test any efficiency wages implications.

INFORMATION ON THE CONTRACT

The second part of the franchisor’s questionnaire asked more direct information on the contractual arrangements.

Q.1 Monitoring Frequency.

1. How often do you inspect the outlets of your company (e.g., daily, weekly, every month, etc.)?

Table 3-14

Monitoring Frequency	1.A	1.B	1.C	2.A	2.B	3.A	3.B
C/O outlets	Twice per week	Daily	N/A	Daily	Daily	Daily	N/A
Franchised outlets	Monthly	Weekly	Monthly	Weekly	Twice per month	Monthly	No inspection

It is interesting to remark that despite the strong moral hazard problem reported at franchised outlet level, by the two cleaning-services companies of our sample, there is still a considerable difference in the monitoring frequency between c/o and franchised outlets.

The information reported in the table above can be rearranged in a ‘contingency table’ in order to perform a non-parametric test for structural differences between the two sub-samples. In other words, we are going to adopt a Chi-square test to study the following hypotheses:

H_0 : Monitoring Frequency is independent of the type of outlet, versus

H_1 : Monitoring Frequency is associated with the type of outlet.

Monitoring Frequency	C/O outlets	Franchised outlets	<i>Total</i>
Daily	4	0	4
Twice per week	1	0	1
Weekly	0	2	2
Twice per month	0	1	1
Monthly	0	2	2
No inspection	0	2	2
<i>Total</i>	5	7	12

We obtain the observed and expected frequencies from the data reported in the table above (see Yeomans, 1968, p.286, for an explanation of the calculations techniques) which enable us to obtain a calculated Chi-square =12. The value deriving from the tables for the Chi-square with five degrees of freedom at the 0.05 confidence level is 11.07. Therefore, we can reject our null hypothesis and conclude that the monitoring frequency is structurally different between the two types of outlets.

Monitoring frequency is clearly lower at franchised outlets, as one would expect. This implies that the delegation of the downstream operation enables the principal to save on monitoring costs. Furthermore, we would expect that monitoring frequency is

increasing with the value added by the downstream operation, and that it is negatively related to the royalty rate at franchised outlets. Unfortunately this sample is too small to test such hypothesis, however, the case of ‘no inspection’ reported by 3.B, where the value added downstream is quite low and the royalty rate is zero, represents a case in point.

Q.2 Is advertising paid for by
☐ The franchisor ☐ The franchisee ☐ Both: In what proportion? (Franchisor:) (Franchisee:)

Table 3-15 Advertising Expenditures

	1.A	1.B	1.C	2.A	2.B	3.A	3.B
Franchisor	0	1%	25%	50%	50%	Part	0
Franchisee	100%	99%	75%	50%	50%	Part	100%

Mathewson and Winter (1985) argue that franchisor’s opportunistic behaviour can arise in the franchise relationship since the franchise is an incomplete contract. More specifically, they say that the franchisor might free ride on the franchisees in that once he delegates the outlets to independent agents downstream, he might have an incentive not to keep investing in the ‘brand name’ value. Such a case, they report, is generally related to advertising expenditures that are, they claim, not specified in this incomplete contract. From our findings, however, it seems that all franchise agreements but one specify the exact share of these expenses each party has to make.

All the above findings show that the franchise contract is a very detailed document (see Hadfield, 1990) which covers most aspects of the contractual relationship so as to minimise any room for opportunistic behaviour from both parties, and protect, at the same time, the brand name of the franchisor, and the initial investment of the franchisee (Klein et al, 1978, Klein, 1980, Williamson, 1985, Dnes, 1992 a and b).

Q.3 What do you use as a measure of the performance of an outlet?

☐ Number of customers, ☐ Level of sales, ☐ Level of net Profits, ☐ Level of costs, ☐ Other:

All companies look at the sales level as an index of performance. Most of them, however, look at all the other factors indicated in the questionnaire. 2.A added that they also look at 'happiness' of staff.

Problems with franchisees

Q.4 Did you ever encounter any problems with the franchisees?

☐ No ☐ Yes What type?

Table 3-16

Company	Problems with franchisees
1.A	Cheating on royalties. Attempt to bankrupt the franchisor in order to be free from contractual obligations.
1.B	Problems with payments.
1.C	Not communicating problems early enough.
2.A	Minor problems relating to quality.
2.B	Minor
3.A	Minor
3.B	None

Apart from the two cleaning companies, the other companies did not seem to have experienced any strong problem of franchisees opportunistic behaviour.

Q.5 In what case could you terminate a franchise before the expiry date?

The answers provided to this question are as follows:

- Breach of contract (3.A, 2.B, 1.C);
- False report of royalties, and other type of payments (1.A);
- Insolvency (3.B);
- Any gross deviation from the procedures (2.A, 1.B).

The reasons provided above for an early termination of the contract from the franchisor, did not seem to be too vague so as to enable the principal to take advantage of the franchisees' investment and terminate without a strong motivation.

However, we are not aware, obviously, of the possible presence of some particular contractual clauses that would allow the franchisor to act opportunistically. This argument will be investigated further in the franchisees survey.

Problems with managers

Q.6 Did you ever encounter any problems with the managers of the outlets in your ownership?
[] No [] Yes What type?

Table 3-17

Company	Problems with managers
1.A	None
1.B	Problems of reliability.
1.C	N/A
2.A	Lack of commitment
2.B	None
3.A	None
3.B	N/A

Q.7 In what case could you fire a manager before the expiry date?

The answers provided to this question are as follows:

- Usual employment law conditions (3.A);
- Consistent under-performance (1.A);
- Any gross deviation from the contract (2.A, 1.B).

Also in this case it is not clear that the company could fire a manager without a good motivation. Nevertheless, as we pointed out above, all companies said to find it easier

to lay-off managers. This can certainly be regarded as a disciplinary device on the managers of the company-owned outlets, as we argued in the previous chapter.

PRICE SETTING

Q.8 Who sets the price of the product/service in the franchised outlets?

Q.9 Who sets the price of the product/service in the company-owned outlets?

Table 3-18 Price Setting

	1.A	1.B	1.C	2.A	2.B	3.A	3.B
C/O outlets	The Company	The Company	N/A	The Company	Confidential	Joint	N/A
Franchised outlets	The Franchisee	Joint	Joint	Joint	Confidential	Joint	Confidential

It is interesting to note that, unlike what is reported by the franchisees as we will report below, no franchisor said to have the exclusive decision right on the price downstream. This has important implications in terms of franchise regulation as we will discuss below in deeper details. Since the European regulation allows block exemption for franchise agreements provided that they are not associated with other forms of vertical restraints (such as resale price maintenance in this case), we would expect the franchisors who set the price for the final product not to reveal this information.

FINANCIAL INFORMATION ON THE COMPANY

Q.10 What has been the company's approximate average level of total turnover per annum since the first year of operation?

Q.11 What has been the approximate level of net profits per annum since then?

With these questions we intended to gather data which would enable us to compare the financial performance of the company over time, with the organisational structure adopted during the same period. Unfortunately, the respondents were extremely reluctant to provide us with information on Turnover and Profits of the Company. Only in one case (namely, 3.A) were these data provided, in the other cases the respondents stated that confidentiality issues prevented them to release this information.

3.5. *The Outlet Survey*

In order to gather information at outlet level we decided to design a different questionnaire to be mailed directly to each outlet of the above companies. In order to obtain the entire list of the outlets of each company of the sample and their addresses in UK, we made use of the electronic 'Business Directory' of British Telecom. In this way we managed to obtain the list of all the outlets of the chains, and to send the questionnaire to all of them. Since from this list we could not distinguish franchised from company-owned outlets, we sent the entire questionnaire to all the outlets asking the respondents to fill in the parts which were appropriate to their case. In order to facilitate the choice of the right questionnaire, we adopted different colours, and asked

the respondents to fill in the blue one if franchisees, the yellow one if managers, and the white one, which was the same for both as it was designed to obtain data on the outlet characteristics.

Of the 376 questionnaires we sent, 46 were returned fully completed⁶⁴.

Both the questionnaire for the franchised outlets and the one for the company-owned outlets were divided into three main sections:

- a) Information on the Franchisee/Manager;
- b) Information on the Contract;
- c) Information on the Outlet.

The first part, a), on the agent, aimed at testing whether the different characteristics of these agents were regularly reflected in a particular contractual choice (i.e., whether a franchise or a management contract). These regularities, if observed would provide evidence to 1. the existence of a separating equilibrium, and 2. the presence of a self selection process on the agents' side, according to which the agents would choose a particular contract to best suit their typology.

The second part, b), was meant to gather information on the contract in order to investigate the presence of single/double sided moral hazard, and/or, of contractual

⁶⁴ No incentives were offered for completing the questionnaire except that an offer to share the output of the study was extended to respondents willing to receive the results of the survey. Strict confidentiality of individual responses was guaranteed.

provision to correct for such problems. Furthermore, some questions were designed in order to investigate if any cases of franchisor's opportunistic behaviour had arisen during the contractual relationship, analogously to what was asked in the franchisor's questionnaire to explore the experience of franchisees/managers opportunism. This section also asked for information on the contractual terms, that is, the franchise fee and the royalty rate, to check for the stability of these terms, and the way the relative magnitude would affect the individuals' contractual choice and behaviour. For example, a higher initial investment/franchise fee, would represent a bond on the performance on the agent, and would therefore represent a hostage, guaranteeing the franchisor from the franchisee's misbehaviour, which would be less likely to arise in cases where a higher financial commitment is requested from the agent. This would be even more so the larger the degree of sunkness of this investment.

We also asked who sets the price of the final product to test: (i) whether there is a higher likelihood of observing a franchise contract when the franchisee has the power to choose the price of the final product, and, (ii) whether the franchisors dictate the final price thus imposing an additional vertical restraint, i.e., Resale Price Maintenance (RPM), on the franchisee (note however, that such imposition is generally disguised because of legal reasons as we explained above).

Finally, part c) was specifically designed to obtain information on the physical (and financial) characteristics of the outlet, in order to gather data that would enable us to testing the validity of the main hypotheses set by the literature, according to which contractual heterogeneity is mainly dictated by outlets heterogeneity. In order to

investigate the presence of inter and intra brand competition, we asked about the distance from outlets of the same chain and of competing chains.

3.5.1. The Outlet Responses

Unfortunately the response rate for such surveys is not very high, especially in the case of small outlets. The final number of fully completed questionnaires which could be used for our estimations amounts to 46. The characteristics of the sample represented by the final respondents are reported in the following Table.

Table 3-19

Business Category	Total Number of outlets	Number of C/O outlets	Num. Franchised outlets
Services (building, cleaning, business, vehicle)	11	0	11
Restaurants, Catering, Hotels	16	5	11
Retailing, Distribution, Wholesale vending	19	7	12
TOTAL	46	12	34

The attributes of the respondents, reported in the table above, seem to reflect quite closely the relative proportions of each sector; in other words, the sectoral distribution of the respondents approximates the sample quite well, see the table above, therefore

the population, distribution. Hence, the final sample, does not seem to present a type of bias due to any sectoral over or under-representation. A different type of bias which could have arisen in the sample is related to the characteristics of the respondents. Actually, our major concern was to design the questionnaire in such a way as to ensure a wide representation of the respondents. More particularly, in order to make sure that our data were reliable enough to test hypotheses like one-sided and double-sided moral hazard, we had to make sure that the franchisees who experienced any problems within their contractual relationship would respond. Arguably our final sample might be biased in the opposite direction, that is, it might over-represent managers and franchisees who encountered some type of problems in their relationship with the company-franchisor⁶⁵. However, this fact is not worrying in that it would actually strengthen our possibilities of testing for the arguments pro and against this contractual choice, allowing us to assume, without too much loss of generality, that the non-respondents fall in the standard case, i.e., not facing abnormal situations.

⁶⁵This was the case with the cleaning services companies among the respondents of the franchisors' survey.

3.5.2. The Survey: Analysis of the Answers: The Franchisees

The first part of the questionnaire on the outlets was meant to gather information on the agents' characteristics in order to test our claim that this contractual relationship can be affected by adverse selection. Therefore, it started by investigating school qualification, prior occupation (as the forgone-'irrelevant'- alternative), previous income (as a proxy for reservation utility), age of the individual (as a proxy for experience⁶⁶), previous experience and training. These questions are then followed by a series of scaled questions on the motivations for the particular contractual choice and the weight of different factors on this choice. And, finally, the last part concentrates on more specific information on the contract. These are both financial and qualitative information, aimed at testing our second main argument, consistent with the existing literature, on the presence of double-sided moral hazard problems.

In this part of the analysis we are going to concentrate our attention on the qualitative information provided by the respondents. The following chapter will then concentrate on the quantitative aspects.

⁶⁶See the following chapter for a deeper discussion on this point.

Q. 6. Please rate the reasons why you decided to take up the franchise

Table 3-20

	Mean	Median	Standard Dev.n	Min	Max
Q.6					
* Opportunity to have own business	2.171429	2	1.150082	1	5
* Higher expected income that in a fixed-salary job	2.8	3	1.278786	1	5
* Less risky than starting a business on your own because	1.628571	1	0.910259	1	4
* Greater job satisfaction	2.085714	2	1.067472	1	5
* Had appropriate experience	3.470588	4.5	1.709781	1	5
Legend: Range goes from 1=extremely important, to 5= not important.					

Other:

- Availability of training and support
- More Professional
- Less interference than management
- Could generate high sales

The ‘entrepreneurship’ motive seems to dominate this contractual choice of the agents. By far the stronger motive for choosing franchising is, consistent with our theoretical analysis, the relatively lower riskiness than setting up an independent business.

Table 3-21

Q. 7. Would you be otherwise self-employed if you had not taken up the franchise?		
	<i>Number Respondents</i>	<i>Percentage Respondents</i>
Yes	13	37%
No	11	34%
Don't know	10	9%
Total	34	100 %

Table 3-22

Q. 8. Was prior experience required when you took up the franchise?		
	<i>Number Respondents</i>	<i>Percentage Respondents</i>
Yes	4	15%
No	30	85%
Total	34	100 %

Lafontaine (1992) adopts a dummy variable in her empirical investigation to indicate whether previous experience in the business was required by the franchisor. She considers this variable as an indicator of franchisees' input importance, which, together with other variables, she regards as an indicator of franchisee's moral hazard. However, she argues, this could be seen as a rationing (screening) device, in which case this requirement would have a negative impact on the extent of adoption of franchising by a firm. The results she obtains, though, show that the effect of this variable on franchising does not differ significantly from zero. As we show later in this study, 'general' rather than 'specific' experience seems to be of more relevance to the franchisors. Most companies, actually, prefer to provide their own training to the

‘right’ human capital force.

Table 3-23

Q. 9. Did you attend a training course to become franchisee?		
	<i>Number Respondents</i>	<i>Percentage Respondents</i>
Yes	26	75%
No	8	25%
Total	34	100 %

‘Weeks of training’ is a variable that Lafontaine (1992) adopts to measure franchisor’s input as a proxy for franchisor’s moral hazard. She finds this variable to have a negative effect on the percentage of franchised outlets in a company. This result, however, seems at odds both with the argument presented above on human capital, and with our argument (consistent with Klein, 1980) about the adverse consequences such opportunistic behaviour of the franchisor would have on his company.

Table 3-24

Q. 9. Who paid for the training course?		
	<i>Number Respondents</i>	<i>Percentage Respondents</i>
franchisor	8	30%
franchisee	16	62%
both	2	8%
Total	26	100 %

Q. 10. What do you feel are the main advantages of franchising to you?

Table 3-25

	Mean	Median	Standard Dev.n	Min	Max
Q.10					
* Higher earning	2.8125	3	1.330474	1	5
* Independence / an opportunity to run your own business	1.636364	1	1.025249	1	5
* Benefit of a well-known, protected brand name	2.636364	3	1.342064	1	5
* Less capital risk than an independent business	2.242424	2	1.061553	1	5
* Backing of a large organisation (advice, training, etc.)	2.5	2	1.191367	1	5
Legend: Range goes from 1=big advantage to 5= not relevant.					

Other:
<ul style="list-style-type: none">• Access to suppliers• More brand exposure

11. What do you feel are the main disadvantages of franchising to you?

Table 3-26

	Mean	Median	Standard Dev.n	Min	Max
Q.11					
* Tight control of the franchisor via the contract	3.121212	3	1.139012	1	5
* High royalties	3.333333	3	1.493039	1	5
* Lack of direction by the franchisor	3.060606	3	1.367923	1	5
* National brand name might be tarnished by other (bad) franchisees	3.5	3	1.244342	1	5
Legend: Range goes from 1=big disadvantage to 5= not relevant.					

Other:
<ul style="list-style-type: none">• Lower mark up than if independent• High cost of franchise fee

- Lack of national marketing
- None

12. Do you think the quality of the product/service provided by other franchisees affects your sales?

Yes= 18

No= 17

There is room for horizontal free-riding (Brickley and Dark, 1987) as quite a number of franchisees (51%) believe that their performance is affected by the behaviour of other franchisees of the same company.

Table 3-27

Q. 13. How do you feel about your business?

	<i>Number Respondents</i>	<i>Percentage Respondents</i>
Satisfied about the present franchise	17	53%
Not satisfied with the present franchise	7	22%
Would rather be just the manager	1	3%
Would rather have an independent business	5	16%
Would rather have a franchise in a different business. Why?	2	6%
<i>Total</i>	<i>32</i>	<i>100 %</i>

Information on the contract

1. Is your contract: ☐ A written document you signed ☐ An informal agreement

How many years does it last for?

As one would expect, all have a written contract but one. Its duration is generally five years, (23 cases). In two cases only is it seven years. Nine outlets, then, have a 10

years agreement. These outlets pertain to the services sector. This might be interpreted as a way, when higher initial investment is required, to provide stronger incentives to the agents downstream to participate to the contract by guaranteeing them a longer flow of expected returns from this investment (Lyons, 1996).

Table 3-28

2. Do you think that your contract:		
	<i>Number Respondents</i>	<i>Percentage Respondents</i>
Is weighted in favor of the franchisor	23	69.7 %
Is weighted in favor of the franchisee	0	0%
Is about right	10	30.3 %
<i>Total</i>	<i>33</i>	<i>100 %</i>

Other: Is unenforceable

Table 3-29

3. According to your contract		
	<i>Number Respondents</i>	<i>Percentage Respondents</i>
The franchisee does not have the right to sell his/her franchise	0	0
The franchisee may sell the franchise only to the franchisor	2	5.8 %
The franchisee may sell the franchise only to a person proposed by the franchisor	1	2.9 %
The franchisee may sell the franchise to anybody but needs the franchisor's approval	28	82.4 %
The franchisee may sell the franchise to anybody without the franchisor's approval	3	8.8 %
Sale rights are not specified	0	0 %
<i>Total</i>	<i>34</i>	<i>100 %</i>

Table 3-30

4. In what case could the franchisor terminate the franchise before the expiry of the contract?		
	<i>Number Respondents</i>	<i>Percentage Respondents</i>
Low turnover	10	31.3%
Low quality of the product/service provided to customers	21	65.6%
Too high costs of operation	1	3.1%
<i>Total</i>	<i>32</i>	<i>100%</i>

Other:

- Any persistent breach of the agreement
- Buying 'off' contract supplies
- For necessary refurbishment of the premises -2 cases-
- Failure to observe all conditions of agreement
- Purchase of from other sources -2 cases-
- Breach of contract -2 cases-
- Franchisee's insolvency

Table 3-31

5. Did the franchisor ever propose to buy back the franchise?		
	<i>Number Respondents</i>	<i>Percentage Respondents</i>
No	31	91.1%
Yes	3	8.9%
<i>Total</i>	<i>34</i>	<i>100%</i>

For what the reason?

- Because they intend to transform the chain into a wholly owned company
- Dissatisfied with rewards from some franchisees
- As a result of a dispute

Table 3-32

6. Did you ever threaten to terminate the relationship?		
	<i>Number Respondents</i>	<i>Percentage Respondents</i>
No	29	85.3 %
Yes	5	14.7 %
<i>Total</i>	<i>34</i>	<i>100%</i>

For what reason?

- Poor support from franchisor
- No help from franchisor
- Dissatisfied

Table 3-33

7. Do you plan to renew the contract when it comes to an end?		
	<i>Number Respondents</i>	<i>Percentage Respondents</i>
No	6	17.6 %
Yes	24	70.6 %
Don't know	4	11.8 %
<i>Total</i>	<i>34</i>	<i>100%</i>

For what reason?

- To set up an independent business

Table 3-34

8. Has your franchise been renewed?		
	<i>Number Respondents</i>	<i>Percentage Respondents</i>
No	28	82.3 %
Yes	6	17.7 %
<i>Total</i>	<i>34</i>	<i>100%</i>

How many times?
In two cases twice, just once in the other four cases.

9. Price recommendation, (RPM).

In 12 out of 34 cases the respondents declared that the franchisor sets the price of the final product. This suggests that there are a large number of cases where other vertical restraints like RPM are coupled with franchising. This information was not disclosed by the franchisors' responses in that, as we explained above, this practice is not allowed within the 'block exemption' European regulation on franchising.

Table 3-35

10. Advertising expenditures		
	<i>Number Respondents</i>	<i>Percentage Respondents</i>
No clear arrangement	7	20%
franchisee	12	35%
franchisor	2	6%
both -50% each-	5	15%
both -different shares-:		
franchisee 90% - franchisor 10%	1	
franchisee 80% - franchisor 20%	1	
3% of turnover each	2	12 %
Both -they did not provide the exact shares-	4	12%
<i>Total</i>	<i>34</i>	<i>100%</i>

11. and 12. Initial Investment

Lafontaine (1992) finds that the more finance provided by the franchisor, the higher

the percentage of franchised outlets in the chain. Here this is not the case as only in one of the 34 franchise investigated outlets, did the franchisor provide any finance, this was however, an extremely small share- only 1.000 pounds, that is, the 10%, of the initial investment of 10.000 pounds-. Nevertheless, it's worth anticipating that according to the econometric results obtained in the following chapter, we find that there is a binding financial constraint on the franchisees. Interpreting Lafontaine's results along these lines, we can look at the provision of capital by the principal relaxes this constraint on the agents, and makes it possible for a larger number to participate, thereby resulting in a larger number of franchised outlets. The explanation we provide in our econometric study to explain our findings on lack of participation of the franchisor to this initial investment rests on the 'human capital selection' consequences of credit rationing (Cressy, 1996), and on the commitment of the agent this investment generates.

15. Have the franchise fee and/or the royalty rate changed since the first year of your franchise?

☐ No ☐ Yes How?

20 no

10 franchise fee increased for new franchisees

1 franchise fee increased royalty rate decreased

1 both franchise fee and royalty rate increased

2 set up an advertising fee

These answers suggest that the contract terms are in most cases held constant. Analogous finding were obtained by Lafontaine and Shaw (1996), who, consistent with our hypotheses, explain this with reputation motives for the franchisors.

16. In your view has the contract been adequate?

☐ Yes ☐ No Why?

Twenty-three franchisees (67%), thought that the contract was adequate. Of the remaining eleven, seven stated that in their view the contract was biased in favour of the franchisor (20%). The other four (13%) provided the following motivations:

Franchisor's inexperience in franchising has resulted in many contractual complications
changes in supply arranged
no help from Franchisor
In one case no motivation was provided.

17. Did you ever encounter any problems in your relationship with the franchisor?

☐ No ☐ Yes What type?

- Poor service, inefficient, low quality of supplies
- poor communication (7 cases)
- problems with supplies
- other f.sees operating in the area
- f.sors provisions too costly make product uncompetitive
- franchise has been stopped and there is no further possible development for me in this brand*
- they were not honest about cost and expected profits
- incompetent promotion arrangements
- no development for more franchise in this company*
- changes of the contract when it suited the franchisor
- changes in the contract

* As Hadfield (1990) noted already, it is sometimes the case that one franchisee operates more than one outlet as he would find scope for entrepreneurship under the shield of a brand name. This reinforces our 'human capital' hypothesis for the

explanation of the contractual choice.

18. Has the contract ever been changed?

☐ No ☐ Yes How?

In the 82% of cases (28 franchisees) the contract had not been changed

The remaining 18% of contracts were changed as follows

- 1. Change in royalty rate
- 1. To reflect changed operating constraints
- 1. To incorporate bonding changes (?)
- 1. Franchisor now retains 50% property of the stock

19. Do you think there is any section in the contract that should be changed?

☐ No ☐ Yes Which?

Twenty-two (65%) believe there is no need for the contract to be changed. The 30%, i.e. 10 franchisees, stated that it should be changed as follows:

- 2 Many parts should be changed, but they did not give any details.
- 1 franchisee should be given the right to terminate and receive compensation in case of poor performance of the franchisor
- 2 Said that one year restriction to go independent in the same area should be abolished
- 1 Opt out condition
- 1 Royalty rate too high (10%) should be changed
- 3 franchisees were not happy with the supply arrangements. One of them suggested they should be given the possibility of buying supplies also from companies other than the franchisor.
- 2 Did not answer this question.

20. Would you like to add any comments about your franchise relationship?

- very good training and back up
- they do not want any more franchise
- Franchisor is jealous because they earn more than he does
- Started with 20 franchised outlets, but, as franchisor was incompetent, many contractual problems arose, lost 5 outlets in 18 months and stopped franchise further
- good after problems at start
- bad Franchisor
- would like more help and input on supply
- Very good and helpful Franchisor
- I wish it was over
- Franchisor does not give enough confidence to franchisee
- dissatisfied with quality of training and support from Franchisor
- Franchisor now has improved his assistance. Success only due to franchisee effort

3.5.3. The Survey: Analysis of the answers: The Managers

The last part of our survey concentrates on the responses provided by the managers of company-owned outlets (the questionnaire on the outlets characteristics was meant to gather data to test our hypothesis by means of econometric estimations, hence it will not be included in this analysis of the survey).

Also in this section, as in the one above on franchisees, we are going to concentrate on the information provided by the respondents that are not included in the econometric analysis presented in the following chapter. In other words, in this section we are going to investigate the presence of common patterns in the motivations for this

contractual choice of the agents. In the conclusion to this chapter we comment the findings of both sections.

Q. 8. Why did you decide to take this job instead of applying for a franchise?

Table 3-36

	Mean	Median	Standard Dev.n	Min	Max
Q.8					
* Provides safer earnings than franchising	2.22222	1	1.715938	1	5
* Provides higher earnings than franchising	3.22222	3	1.641476	1	5
* Does not involve any financial investment	1.9	1	1.197219	1	4
* Greater job satisfaction than being a franchisee	3.4	3.5	1.429841	1	5
* Less problems than being a franchisee	2.4	2	1.173788	1	5
* Had appropriate experience	2.4	2	1.505545	1	5
Legend: Range goes from 1=big advantage to 5= not relevant.					

From the answers presented in the table above, by far the strongest motivation for choosing a management instead of a franchise contract seems to be the fact that this option does not involve any financial investment, in turn followed by the consideration that it provides safer earnings. These two responses provide support to the hypothesis set out in the theoretical part of this study (see previous chapter), where we argued that the presence of uncertainty downstream involves the need to address risk sharing issues related to the contractual choices. Since we assumed the agents to be risk averse and the principal to be risk neutral, we argued that only the agents who are better skilled, hence more confident about their abilities, will choose the franchise

option, which involves risk sharing, as opposed to the management contract, which involves full insurance of the agent. In other words, we assumed the existence of a self-selection process on the agents' side. Our hypothesis seems well supported by these responses, especially when coupled with the variables representing the agents' characteristics, see following chapter.

9. Do you get any form of financial incentives apart from the salary?

☐ No ☐ Yes- Is it: ☐ % of revenues ☐ Fixed bonus ☐ Other:

In all but one case, that is, in eleven cases, the managers receive an incentive payment in the form of a commission or of a performance bonus.

10. Was prior experience required when you started this job?

☐ No ☐ Yes How many years?

11. Did you attend a training course to become a manager for this outlet?

☐ No ☐ Yes Who paid for it? ☐ You ☐ The company

Only in three cases was prior experience required, while in six cases out of twelve the company provided a training course.

12. What do you feel are the main advantages of your job to you?

13. What do you feel are the main disadvantages of this job to you?

All report to feel satisfied with their job. Some say that they feel the main advantage is that it is less stressful than being a franchisee. However, almost all lament having to work very long hours.

14. How do you feel about your job?

- ☐ Satisfied about it
- ☐ Would rather be a franchisee
- ☐ Would rather have an independent business
- ☐ Would rather have a different job Why?

All say they are satisfied with their job apart from two who say that they would rather have a different job because their pay is not correlated with the number of hours they work.

Information on the contract

1. Is your contract:

- ☐ A written document specifying precise duties and responsibilities
- ☐ An informal agreement

In three of the twelve cases the parties do not have a formal agreement, in the remaining nine they adopt written contractual arrangements.

2. What are your contractual obligations?

- ☐ To reach a certain target of sales
- ☐ To work for a certain number of hours
- ☐ To provide a minimum level of quality of the product/service
- ☐ Other:

All the three above obligations hold in all cases. In one case there is an additional obligation of covering all variable costs. They seem rather tight obligations for being an employment relationship. Apparently in this relationship the bargaining power is on the principal's side, who can set strict contractual conditions to make sure to avoid any agents' shirking, in which case, it would be quite easy to lay-off the agent,

consistent with what stated by the franchisors as reported in the first part of the survey above.

Table 3-37

4. In what case could the company lay you off before the expiry of the contract?	
Low turnover	4
Low quality of the product/service provided to customers	4
Too high costs of operation	3
<i>Total</i>	<i>11</i>

Other: Misconduct (2 cases)

6. Do you encounter any problems in your relationship with the company?

☐ No ☐ Yes What type?

7. Is there any section in your contract you would like to be changed?

☐ No ☐ Yes What type?

None of the respondents reported of having problems with the company, however, three respondents said they would like to have a lighter number of hours. In one case the respondent lamented about a contractual clause that allows the company to move the manager to any other outlets of the chain in a different location.

3.5.4. Conclusion

The results obtained by the survey presented above seem to provide large support to the hypotheses proposed and the results obtained by the model presented in the first part of this study.

Contractual mix of franchising and vertical integration can be regarded as an effective governance arrangement which delivers human capital, entrepreneurial discretion and flexibility by providing the right incentives to heterogeneous agents downstream, and simultaneously reducing costs of monitoring and coordination.

From the results of the survey illustrated here, the transaction costs hypothesis, according to which organisational forms evolve in a way that minimises the sum of production and transaction costs, did not find supporting evidence. In a case like the one analysed here, where production costs do not vary, or vary to a very limited extent, over different organisational structures, this theory would conclude that transaction costs drive this choice. However, no evidence on this point was provided by the responses of the franchisors. When asked about the motivations for their specific contractual choice, agency problems were reported as being the driving force. Two of our respondents, however, only adopted franchise because by concentrating only on this option they minimise coordination costs.

Martin's (1988) contention, along with other authors supporting the 'capital-shortage', and risk sharing (on the principal's side) hypotheses, that the contract mix is determined by the need of the principal to spread the financial risk, or to obtain capital

from external sources (i.e., the franchisees), was refuted by our results. In fact, the opposite view, which we suggested above, prevailed. More specifically, our model assumed that in this relationship the principal is risk neutral while the agents are risk averse. This assumption was positively supported by the franchisors' responses that stated the sharing of financial risk not to be a motivation for their contractual choice⁶⁷.

The managers of the company-owned outlets stated that their decision to become managers instead of applying for a franchise contract was due to the fact that this option does not involve any financial investment. The second most important motive was that it provides safer earnings than a franchise. These answers provide strong support to our theoretical predictions according to which the agents' risk aversion, coupled with the need of full insurance sought by these agents, leads them to this contractual choice⁶⁸.

Analogously, the franchisees reported that by far the main reason for their contractual choice was that this was a less risky option than setting up a business on their own. This reveals strong 'entrepreneurial features' in the franchisee's figure, along with our hypotheses. Actually, our findings along this route suggested that this motive is even stronger than what we expected. In fact, among the responses on the main advantages and disadvantages of their franchise, some franchisees reported to be happy with

⁶⁷However, they regarded this as an advantage of employing franchisees rather than managers. This advantage, though, can be explained by the commitment features attached to the franchisee's investment, rather than by the shift of the risk on the agent. We discuss this point in more details in what follows.

⁶⁸In the following chapter we test the correspondence of agents' and contracts characteristics.

having possibilities of development within their company, some others lamented that, since their company had stopped franchising, there was no space for them to develop any further in that business. Some franchisees, in fact, albeit only a small share of them, are also owners and investors, more specifically, “they are master franchisees, with the rights to sub-franchise within their (normally larger) territory. Other franchisees own several outlets directly and hire managers to operate their outlets, some others may own multiple franchises, each with different partners and other investors,” (Hadfield, 1990, p.934). This proves that the ‘entrepreneurial’ motive in this choice is very strong and that the partial insurance offered by a franchise contract is a very appealing feature to risk-averse ‘would-be’ entrepreneurs.

Although this entrepreneurial dynamism is certainly the most appealing characteristic of this contractual option for the upstream company, it is constrained by the size and the extent of specificity of the initial investment. One of the investigated franchisors, in fact, said that the contemporaneous adoption of company-owned outlets is due to the difficulty of finding potential franchisees because this involves a large initial sunk investment. This suggests, again, the existence of a binding financial constraint on the franchisees, which is also confirmed by the econometric results presented in the following chapter⁶⁹.

⁶⁹ Recent research on entrepreneurship (Cressy, 1996) suggests ‘human capital’ selection motives to be the main reason for debt rationing (i.e., binding financial constraint) on potential entrepreneurs, see following chapter.

Most important, we found strong evidence on franchisees' binding financial constraint. One would then ask why don't franchisors, who are assumed to be risk neutral, provide finance by taking part to this initial investment in order to relax this constraint?⁷⁰ The rationale for this behaviour lies, in our opinion, in two main arguments. First, the financial constraint can be regarded as an additional incentive-device adopted by the franchisor for its bonding characteristics, in order to guarantee downstream performance. This was showed by the results of this survey, from which it emerged that where this characteristic lacks, this contract is no longer optimal and firms tend to abandon it. Second, and perhaps more important, this initial investment serves as an additional self-selection instrument on the market for potential agents. According to what we argued in the theoretical part of this study, this contract mix is optimal because of its human capital implications, in the sense that it overcomes adverse selection problems. These results, together with those obtained by our econometric analysis below, seem to provide evidence on this point. Only 'better-skilled' agents will decide to take on this financial risk, a 'success dependent' compensation package involving a financial investment would not be accepted by a 'low-skilled' (worker) agent, (see Cressy, 1996).

At the same time, though, this initial investment can be seen as a bond posted by the agent on his performance (inter alia, Klein, 1980, Williamson, 1983). Hence, the larger the size and the specificity of this bond, the stronger the commitment of the

⁷⁰ Lafontaine (1992) shows that franchisors who provide finance have a higher percentage of franchised outlets.

agent who posts it. This point was also positively supported by our survey's responses. In fact, in some instances where this investment is small in size, and can have a quite high salvage value, it does not offset the gains to the franchisee from cheating, i.e., it loses its commitment scope. This was the case for two companies of our sample, that decided to revert to a fully integrated structure.

At the same time, however, this specific investment could have 'hostage' characteristics (Williamson, 1983). In other words, the principal could take advantage of the specific investment and act opportunistically by holding-up the outlet once the irreversible investment is done. In the first part of this study we criticised this argument, in that we would expect such type of behaviour to turn against the franchisor (see chapter one). Even though our franchisors sample is quite small, hence we cannot claim generality for our results, in no case did it provide any evidence of this type of franchisor's moral hazard. Also from our (larger) sample of franchisees, no evidence of hold-up attempts could be gathered. The pattern followed by the franchisors in their acquisition and dismissal of outlets presented by our data did not show evidence of such a behaviour. On the contrary, the results of the survey showed that franchisees were more likely to have threatened the principal of an earlier termination of the contract (14.7%), this was explained by the respondent as due to the unsatisfactory support provided by the company.

The need to curb potential moral hazard on both sides brings the parties of the franchise relationship to the adoption of written contracts (all franchisees reported their adoption). These documents actually specify in great details all the cases in

which the contract can be terminated by the franchisor, and the franchisee's sale rights. As already noted by Klein (1980), franchisors use restrictive covenants (often lamented by franchisees in our survey), which prevent the franchisee from competing in the same area for some period after he has left the franchise system. This is also generally true for advertising expenditures. These are generally sustained by the franchisees (35%), in some cases they are shared (39%) -in different proportions, see above results- with the franchisee participating with a larger share in most cases. Some cases remain, though, where no precise agreements are arranged.

While the financial commitment of the franchisee, and the fact that his own earnings are linked to the outlet performance, control for this agent's potential moral hazard, as we stated above, this incentive is lacking when the agent is a manager of a company-owned outlet. Our main theoretical prediction in such a case was that the threat of being fired works as an incentive device for these agents. Also in this case we found positive support from the survey's results to our theoretical presumptions. All franchisors said that a strong advantage of managers with respect to franchisees is that they are easier to lay off. Furthermore, many cases were reported by the managers in response to the question asking them about circumstances in which they might be laid off. While the franchise agreement always takes the form of a written contract, this is not always the case for the employment relationship with a manager. This fact, coupled with the above statement, clearly shows that the bargaining power in this relationship is held by the principal. From what declared by the managers in their responses, it looks as if, despite being an employment relationship, the obligations

deriving from the management contract are quite many, working a certain number of hours, achieving a certain target in terms of quality, turnover, etc., and much closer to the franchisee's targets than to those of a simple employee. Although many of them actually lament having to work too many hours, the lay-off threat seems to induce these people to accept tight working conditions. An additional incentive to perform, however, is offered in the form of commissions, and performance related bonuses.

Furthermore, the different power of these two different incentive schemes, i.e., the stronger incentive power provided by the franchise contract with respect to the management contract, is reflected in the different monitoring frequency associated to franchised and company-owned outlets, this is clearly much higher in the latter case.

Unlike the 'location hypothesis' as presented by Martin, who stated that the type of location of an outlet affects the monitoring frequency in franchised outlets, our findings show that this is not the case. All franchised outlets pertaining to the same company presented the same monitoring frequency, which is considerably lower than the monitoring frequency at company-owned outlets. This provides favourable evidence to the hypothesis of our theoretical model that described the moral hazard problem to be more stringent at company-owned outlets, in that the franchise contract, by making the franchisee the last claimant of the operation, minimises this incentive to indulge in opportunistic behaviour.

A large majority of franchisees (69.7%) believes the contract is weighted in favour of the franchisor. As Dnes (1992a) pointed out, "an obvious question is why franchisees freely agree to such arrangements," (p.21). Nevertheless, the majority of the

franchisees thought the contract had been adequate, the most~~ly~~ lamented problem was 'communication failures'. An interesting suggestion made by a franchisee in response to what contractual changes would they suggest, was to include a right for the franchisee to terminate the contract in case of franchisor's bad performance, analogous to the franchisor's right to terminate the franchisee~~d~~. This would certainly be a fair task to pursue for Franchise law. The fact that some franchisees were unhappy with the support provided by the franchisor has to be balanced though, against the fact that there were a fair number who were happy about their relationship, and against the fact that franchisees who had not experienced problems were less likely to have responded to our survey. Moreover, the level of approval seemed to increase over time, and more franchisees reported to be satisfied after initial problems. Some franchisees lamented their contractual obligation not to buy supplies from other firms than the franchisor. It would be interesting to explore how, in the presence of downstream competition, the principals are able to establish a monopoly position upstream by creating a network of franchised outlets. However, this is beyond the scope of this study.

Prior experience is not generally required, neither for franchisees nor for managers. Most of the companies prefer to provide their own training course. Analogously to empirical results obtained by studies on entrepreneurship, see following chapter, these results suggest that the better abilities of a worker do not identify with specific experience. Many franchisees conclude that their success is only due to their own effort.

One last important remark concerns the lack of contract terms customisation. In other words, we found that contract terms are generally standard across all the outlets of a chain, and that these tend to be stable over time. Although this might be explained by transaction costs hypotheses namely by the costs of customising and implementing a large number of heterogeneous contracts, we rather tend to believe, consistent with what we argued above, and with Lafontaine and Shaw (1996), that this is driven by the need for reputation of the franchisors.

3.6. APPENDICES⁷¹

⁷¹ The cover letters to the questionnaires that follow are also in the name of Dr. M. Kwon from the Warwick Business School. The research performed on the basis of the survey was supposed to be joint work with Dr. Kwon but his appointment as Associate Professor in Korea made this unfeasible.

3.6.1. Appendix 3.6-1 The Franchisor’s Questionnaire



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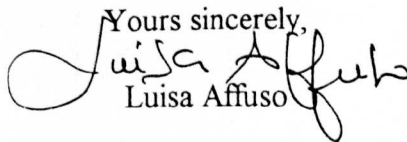
Coventry, 3rd July, 1995

Dear Sir/Madam,

We are a group of researchers from the Business School and from the Department of Economics of the University of Warwick. As we are conducting a study on the adoption of franchising contracts and company ownership by firms in the U.K., we are contacting all the companies affiliated to the British Franchise Association. The purpose of this survey is to analyse differing forms of industrial organisations in order to draw policy conclusions both at a national and at a European level.

Although we realise the completion of the questionnaire will demand some of your time, we do hope for your kind cooperation. We will provide a short summary of the research to all the participants who return the questionnaire. We hope this will prove interesting to you.

We would like to stress that all the survey data are absolutely confidential, and that no information will be published about identifiable persons or companies without their permission under any circumstances. If any questions arise, please do not hesitate to contact us, either by post or by phone.

Yours sincerely,

Luisa Affuso



QUESTIONNAIRE FOR THE FRANCHISOR

1. In what year did your company start?.....

2. In what year did your company start franchising?.....

3. How many franchised and compay-owned outlets have you had on average since then?

	75 - 79	80-84	85- 89	90-94	1995
Company-owned	[]	[]	[]	[]	[]
Franchised :	[]	[]	[]	[]	[]

4. What was the average turnover of these outlets over the following time periods?

	75 - 79	80-84	85- 89	90-94	1995
Company-owned	[]	[]	[]	[]	[]
Franchised	[]	[]	[]	[]	[]

5. Do you have specific written contracts with your franchisees?

☐ No ☐ Yes

6. Have you got both company-owned and franchised outlets?

☐ No ☐ Yes Why?.....

7. Why do you retain the ownership of some outlets?.....

8. Is there one standard contractual form for all the franchisees?

☐ Yes ☐ No, several different contracts are in use:
 What makes them vary?.....

9. Do you have formal contracts with the general managers of the outlets owned by the company?

☐ No ☐ Yes

10. How many contracts did you renew on average at the expiry date?

	75 - 79	80-84	85- 89	90-94
Company-owned	[]	[]	[]	[]
Franchised	[]	[]	[]	[]

11. How many outlets did you terminate on average at the expiry of the contract?

	75 - 79	80-84	85- 89	90-94
Company-owned	[]	[]	[]	[]
Franchised	[]	[]	[]	[]

12. Were they	75 - 79	80-84	85- 89	90-94
• Discontinued	[]	[]	[]	[]
• Bought back from the franchisee to be operated by the company	[]	[]	[]	[]
• Transferred from company-ownership to franchising	[]	[]	[]	[]
• Sold to a different franchisee	[]	[]	[]	[]
• The manager was changed	[]	[]	[]	[]

13. How many contracts did you terminate before their expiry date?

	75 - 79	80-84	85- 89	90-94
Company-owned	[]	[]	[]	[]
Franchised	[]	[]	[]	[]

14. Were they	75 - 79	80-84	85- 89	90-94
• Discontinued	[]	[]	[]	[]
• Bought back from the franchisee to be operated by the company	[]	[]	[]	[]
• Transferred from company- ownership to franchising	[]	[]	[]	[]
• Sold to a different franchisee	[]	[]	[]	[]
• The manager was changed	[]	[]	[]	[]

15. Please rate the reasons why you decided to adopt franchising

	extremely important	1	2	3	4	5 not important
* Higher profitability		1	2	3	4	5
* To raise capital		1	2	3	4	5
* Faster expansion		1	2	3	4	5
* Sharing the financial risk		1	2	3	4	5
* Other:.....		1	2	3	4	5
* Other:.....		1	2	3	4	5

16. What are the relative strengths of franchisees as compared to general managers in case of company-ownership?

	extremely important	1	2	3	4	5 not important
* Better skills		1	2	3	4	5
* More committed than managers		1	2	3	4	5
* Care more about the quality of the product/ service delivered to the customers		1	2	3	4	5
* Provision of capital		1	2	3	4	5
* Easier to terminate the contract in case of bad performance		1	2	3	4	5
* Other:.....		1	2	3	4	5

17. What are the relative strengths of general managers in case of company-ownership as compared to franchisees?

	extremely important	1	2	3	4	5 not important
* Better skills		1	2	3	4	5
* More committed than franchisees		1	2	3	4	5
* Care more about the quality of the product/ service delivered to the customers		1	2	3	4	5
* Higher reliability as they are part of the company		1	2	3	4	5
* Easier to lay off in case of bad performance		1	2	3	4	5
* Other:.....		1	2	3	4	5

18. Is the initial investment for the franchised outlets made by
[] The franchisor [] The franchisee [] Both

19. Is it the same for all the franchised outlets?

[] Yes	What is the amount?	Franchisor.....	Franchisee.....
[] No	What is the range?	Franchisor.....	Franchisee.....
	What makes it differ?		
	[] Location of the outlet		
	[] Size of the outlet		
	[] Age of the outlet		
	[] Other:.....		

20. Is the franchise fee required the same for all the franchised outlets?

[] Yes	How much is it?.....	
[] No	What is the range?.....	
	What makes it differ?	
	[] Location of the outlet	
	[] Size of the outlet	
	[] Age of the outlet	
	[] Other:.....	

21. Does the royalty differ among the outlets?

- ☐ No How much is it?.....
- ☐ Yes What is the range?.....
- What makes it differ?
- ☐ Location of the outlet
- ☐ Size of the outlet
- ☐ Turnover of the outlet
- ☐ Other:.....

22. What has been the average annual pay of the general managers in charge of a company-retained outlet since you started?

	75 - 79	80-84	85- 89	90-94
Less than L. 5,000 p.a.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5,000 - 9,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10,000 - 14,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15,000 - 19,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20,000 - 24,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25,000 - 29,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30,000 - 34,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35,000 - 39,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40,000 or more: How much?	<input type="checkbox"/> []	<input type="checkbox"/> []	<input type="checkbox"/> []	<input type="checkbox"/> []

INFORMATION ON THE CONTRACT

1. How often do you inspect the outlets of your company (e.g., daily, weekly, every month, etc.)?

Company-owned.....

Franchised.....

2. Is advertising paid for by

- ☐ The franchisor ☐ The franchisee
- ☐ Both In what proportion? Franchisor..... Franchisee.....

3. What do you use as a measure of the performance of an outlet?

- ☐ Number of customers
- ☐ Level of sales
- ☐ Level of net Profits
- ☐ Level of costs
- ☐ Other:.....

4. Did you ever encounter any problems with the franchisees?

- ☐ No ☐ Yes What type?.....
-

5. In what case could you terminate a franchise before the expiry date?

.....

6. Did you ever encounter any problems with the managers of the outlets in your ownership?

- ☐ No ☐ Yes What type?.....
-

7. In what case could you fire a manager before the expiry date?

.....

8. Who sets the price of the product/service in the franchised outlets?

- ☐ The company ☐ The franchisee ☐ Jointly

d

9. Who sets the price of the product/service in the company-owned outlets?

☐ The company ☐ The general manager ☐ Jointly

10. What has been the company's approximate average level of total turnover per annum since the first year of operation?

	75 - 79	80-84	85- 89	90-94
Less than £. 10,000 p.a.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10,000 - 29,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30,000 - 49,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50,000 - 69,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
70,000 - 99,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
100,000 - 119,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
120,000 - 149,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
150,000 - 179,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
180,000 - 199,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
200,000 - 249,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
250,000 - 299,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
300,000 - 349,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
350,000 - 399,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
400,000 - 449,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
450,000 - 499,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
500,000 - 549,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
550,000 - 599,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
600,000 - 649,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
650,000 - 699,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
700,000 - 749,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
750,000 - 799,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
800,000 or more: How much?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. What has been the approximate level of net profits per annum since then?

	75 - 79	80-84	85- 89	90-94
Negative	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0 -£. 9,999 p.a.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10,000 - 29,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30,000 - 49,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50,000 - 69,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
70,000 - 99,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
100,000 - 119,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
120,000 - 149,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
150,000 - 179,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
180,000 - 199,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
200,000 - 249,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
250,000 - 299,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
300,000 - 349,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
350,000 - 399,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
400,000 - 449,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
450,000 - 499,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
500,000 - 549,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
550,000 - 599,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
600,000 - 649,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
650,000 - 699,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
700,000 or more: How much?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. Would you like to add any comments about the topics covered by the questions above?

.....

.....

.....

11. Would you wish to receive any feedback on the overall results of this study? ☐ Yes ☐ No

e

3.6.2. Appendix 3.6-2 The Franchisee’s Questionnaire



WARWICK
BUSINESS SCHOOL
RESEARCH BUREAU

The Franchisee/General Manager
Gem Travel
53 Haymarket,
London SW1Y 4RP

Tel. 01203.524930

Luisa Affuso
M.J. Kwon

Coventry, 22nd May, 1995

Dear Sir/Madam,

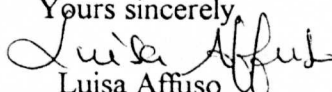
We are a group of researchers from the Business School and from the Department of Economics of the University of Warwick. As we are conducting a study on the adoption of franchising contracts by firms in the U.K., we are contacting all the outlets pertaining to companies affiliated to the British Franchise Association. The purpose of this survey is to analyse differing forms of industrial organisations in order to draw policy conclusions both at a national and at a European level.

Although we realise the completion of the questionnaire will demand some of your time, we do hope for your kind cooperation. We will provide a short summary of the conclusion of the research to all the participants who return the questionnaire. We hope this will prove interesting to you.

We would like to stress that all the survey data are absolutely confidential, and that no information will be published about identifiable persons or companies without their permission under any circumstances. If any questions arise, please do not hesitate to contact us, either by post or by phone.

We would ask you, if your outlet is a franchise, to fill in the blue and the white forms; if it is retained in the company's ownership, to fill in the yellow and the white forms. We look forward to hearing from you soon, and thank you for your kind cooperation.

Yours sincerely,


Luisa Affuso



QUESTIONNAIRE FOR THE FRANCHISEE

1. What is your school qualification?

- ☐ No qualification ☐ CSE ☐ O level/GCSE ☐ A level ☐ University degree
☐ Other:.....

2. What was your occupation prior to entering franchising?

- ☐ Manual ☐ Lower level white collar ☐ Middle management/semi professional
☐ Higher management/professional ☐ Self-employed ☐ Other:.....

3. What was your annual income in the last paid employment before taking the current franchise?

- ☐ Less than £9,999 ☐ 10,000-14,999 ☐ 15,000-19,999 ☐ 20,000-24,999
☐ 25,000-29,999 ☐ 30,000-34,999 ☐ 35,000 or over: how much? £.....

4. In what year did you enter the current franchise?.....

5. What was your age when you took up the franchise?

- ☐ Less than 25 ☐ 25-29 ☐ 30-34 ☐ 35-39 ☐ 40-44 ☐ 45 or over

6. Please rate the reasons why you decided to take up the franchise

extremely important 1 2 3 4 5 not important

- | | |
|--|-------------------|
| * Opportunity to have own business
but still be part of a big organisation | 1 2 3 4 5 |
| * Higher expected income than in a fixed-salary job | 1 2 3 4 5 |
| * Less risky than starting a business on your own because
of proven product/service and ready-made market | 1 2 3 4 5 |
| * Greater job satisfaction | 1 2 3 4 5 |
| * Had appropriate experience | 1 2 3 4 5 |
| * Other:..... | 1 2 3 4 5 |
| * Other:..... | 1 2 3 4 5 |

7. Would you be otherwise self-employed if you had not taken up the franchise?

- ☐ No ☐ Yes ☐ Don't know

8. Was prior experience required when you took up the franchise?

- ☐ No ☐ Yes How many years?.....

9. Did you attend a training course to become franchisee?

- ☐ No ☐ Yes Who paid for it? ☐ You ☐ The franchisor

10. What do you feel are the main advantages of franchising to you?

big advantage 1 2 3 4 5 not relevant

- | | |
|--|-------------------|
| * Higher earning | 1 2 3 4 5 |
| * Independence / an opportunity to run your own business | 1 2 3 4 5 |
| * Benefit of a well-known, protected brandname | 1 2 3 4 5 |
| * Less capital risk than an independent business | 1 2 3 4 5 |
| * Backing of a large organisation (advice, training, etc.) | 1 2 3 4 5 |
| * Other:..... | 1 2 3 4 5 |

11. What do you feel are the main disadvantages of franchising to you?

big disadvantage 1 2 3 4 5 not relevant

- | | |
|---|-------------------|
| * Tight control of the franchisor via the contract | 1 2 3 4 5 |
| * High royalties | 1 2 3 4 5 |
| * Lack of direction by the franchisor | 1 2 3 4 5 |
| * National brand name might be tarnished by other (bad) franchisees | 1 2 3 4 5 |
| * Other:..... | 1 2 3 4 5 |
| * None <input type="checkbox"/> | |

12. Do you think the quality of the product/service provided by other franchisees affects your sales?

☐ Yes ☐ No

13. How do you feel about your business?

☐ Satisfied about the present franchise

☐ Would rather be just the manager

☐ Would rather have an independent business

☐ Would rather have a franchise in a different business. Why?.....

14. How many hours do you work per week?.....

QUESTIONNAIRE ON THE CONTRACT

1. Is your contract: ☐ A written document you signed ☐ An informal agreement

How many years does it last for?.....

2. Do you think that your contract

☐ Is weighted in favour of the franchisor

☐ Is weighted in favour of the franchisee

☐ Is about right

☐ Other:.....

3. According to your contract

☐ The franchisee does not have the right to sell his/her franchise

☐ The franchisee may sell the franchise only to the franchisor

☐ The franchisee may sell the franchise only to a person proposed by the franchisor

☐ The franchisee may sell the franchise to anybody but needs the franchisor's approval

☐ The franchisee may sell the franchise to anybody without the franchisor's approval

☐ Sale rights are not specified

☐ Other:.....

4. In what case could the franchisor terminate the franchise before the expiry of the contract?

☐ Low turnover

☐ Low quality of the product/service provided to the customers

☐ Too high costs of operation

☐ Other:.....

☐ Other:.....

5. Did the franchisor ever propose to buy back the franchise?

☐ No ☐ Yes For what the reason?.....

6. Did you ever threaten to terminate the relationship?

☐ No ☐ Yes For what reason?.....

7. Do you plan to renew the contract when it comes to an end?

☐ No ☐ Yes For what reason?.....

8. Has your franchise been renewed?

☐ No ☐ Yes How many times?.....

9. Who sets the price for the final product/service

☐ You ☐ The franchisor

10. Is there in the contract an explicit agreement on promotional/advertising expenditures?

☐ No ☐ Yes: Do they have to be carried out by:

☐ The franchisor

☐ The franchisee

☐ Both. In what proportion? Franchisor..... Franchisee.....

11. How much was the starting capital/ initial investment required?.....

12. Who provided it?

☐ The franchisor ☐ The franchisee

☐ Both In what proportion? Franchisor..... Franchisee.....

13. Is the franchise fee?

☐ A one- off payment. How much is it? £.

☐ An annual payment. How much is it? £.

☐ Other: What is it?..... How much is it? £.

14. What is the royalty rate you pay? %

What is it related to (e.g., level of sales, level of profits, etc.)?.....

15. Have the franchise fee and/or the royalty rate changed since the first year of your franchise?

☐ No ☐ Yes How?.....

16. In your view has the contract been adequate?

☐ Yes ☐ No Why?.....

17. Did you ever encounter any problems in your relationship with the franchisor?

☐ No ☐ Yes What type?.....

18. Has the contract ever been changed?

☐ No ☐ Yes How?.....

19. Do you think there is any section in the contract that should be changed?

☐ No ☐ Yes Which?.....

20. Would you like to add any comments about your franchise relationship?

21. Would you wish to receive any feedback on the overall results of this study? ☐ Yes ☐ No

3.6.3. Appendix 3.6-3 The Manager's Questionnaire

QUESTIONNAIRE FOR THE MANAGER

1. What is your school qualification?

- ☐ No qualification ☐ CSE ☐ O level/GCSE ☐ A level ☐ University degree
☐ Other:.....

2. What was your occupation prior to starting this job?

- ☐ Manual ☐ Lower level white collar ☐ Middle management/semi professional
☐ Higher management/professional ☐ Self-employed ☐ Other:.....

3. In what year did you start this job?.....

4. What was your annual income in the last paid employment before taking the current post?

- ☐ Less than £.9,999 ☐ 10,000-14,999 ☐ 15,000-19,999 ☐ 20,000-24,999
☐ 25,000-29,999 ☐ 30,000-34,999 ☐ 35,000 or over

5. What was your age when you started?

- ☐ Less than 25 ☐ 25-29 ☐ 30-34 ☐ 35-39 ☐ 40-44 ☐ 45 or over

6. What has been the approximate average level of your annual pay since then?

	75 - 79	80-84	85- 89	90-94
Less than £. 5,000 p.a.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5,000 - 9,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10,000 - 14,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15,000 - 19,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20,000 - 24,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25,000 - 29,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30,000 - 34,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35,000 - 39,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40,000 or more: How much?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Is your pay related to your experience?

- ☐ Yes ☐ No

8. Why did you decide to take this job instead of applying for a franchise?

	extremely important	1	2	3	4	5 not important
* Provides safer earnings than franchising		1	2	3	4	5
* Provides higher earnings than franchising		1	2	3	4	5
* Does not involve any financial investment		1	2	3	4	5
* Greater job satisfaction than being a franchisee		1	2	3	4	5
* Less problems than being a franchisee		1	2	3	4	5
* Had appropriate experience		1	2	3	4	5
* Other:.....		1	2	3	4	5

9. Do you get any form of financial incentives apart from the salary?

- ☐ No ☐ Yes Is it: ☐ % of revenues ☐ Fixed bonus ☐ Other:.....

10. Was prior experience required when you started this job?

- ☐ No ☐ Yes How many years?.....

11. Did you attend a training course to become a manager for this outlet?

- ☐ No ☐ Yes Who paid for it? ☐ You ☐ The company

12. What do you feel are the main advantages of your job to you?

.....

13. What do you feel are the main disadvantages of this job to you?

.....
.....

14. How do you feel about your job?

☐ Satisfied about it

☐ Would rather be a franchisee

☐ Would rather have an independent business

☐ Would rather have a different job

Why?

.....

15. How many hours do you work per week?

.....

QUESTIONNAIRE ON THE CONTRACT

1. Is your contract: ☐ A written document specifying precise duties and responsibilities

☐ An informal agreement

2. What are your contractual obligations?

☐ To reach a certain target of sales

☐ To work for a certain number of hours

☐ To provide a minimum level of quality of the product/service

☐ Other:

.....

☐ Other:

.....

3. Is your job

☐ Permanent

☐ Temporary

How long is it for?

.....

4. In what case could the company lay you off before the expiry of the contract?

☐ Low turnover

☐ Low quality of the product/service provided to the customers

☐ Too high costs of operation

☐ Other:

.....

☐ Other:

.....

5. If for some reason you were to leave your current job (because you decided to quit or were laid off), how quickly do you think you could find a job at about the same pay?

☐ Very quickly

☐ In about 3-5 months time

☐ In about 6-12 months

☐ More

☐ Don't know

6. Do you encounter any problems in your relationship with the company?

☐ No

☐ Yes

What type?

.....

.....

7. Is there any section in your contract you would like to be changed?

☐ No

☐ Yes

What is it?

.....

.....

8. Would you like to add any comments about your job?

.....

.....

.....

9. Would you wish to receive any feedback on the overall results of this study? ☐ Yes ☐ No

3.6.4. Appendix 3.6-4 The Outlet Questionnaire

QUESTIONNAIRE ON THE OUTLET

1. What product/service do you supply?.....

2. What is the approximate size in square feet of your outlet?.....

3. What is the distance in miles from the closest office of the company?.....

4. Where is the outlet located?

☐ In the town centre

☐ Out of the centre What is the closest town?..... How far is it?.....(miles)

☐ In a shopping centre

☐ Close to/Along a motorway or a major out of town road

5. Who owns the premises?

☐ The company/franchisor ☐ The franchisee ☐ A third party: Who?.....

6. In what year was the outlet first established?.....

7. What has been the approximate average level of turnover per annum since then?

	75 - 79	80-84	85- 89	90-94
Less than £. 10,000 p.a.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10,000 - 29,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30,000 - 49,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50,000 - 69,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
70,000 - 99,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
100,000 - 119,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
120,000 - 149,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
150,000 - 179,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
180,000 - 199,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
200,000 or more: How much?	[]	[]	[]	[]

8. What has been the approximate level of net profits per annum since then?

	75 - 79	80-84	85- 89	90-94
Negative	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0 - £. 9,999 p.a.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10,000 - 29,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30,000 - 49,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50,000 - 69,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
70,000 - 99,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
100,000 - 119,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
120,000 - 149,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
150,000 - 179,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
180,000 - 199,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
200,000 or more: How much?	[]	[]	[]	[]

9. What has been the approximate level of costs per annum since then?

	75 - 79	80-84	85- 89	90-94
Less than £. 10,000 p.a.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10,000 - 29,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30,000 - 49,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50,000 - 69,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
70,000 - 99,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
100,000 - 119,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
120,000 - 149,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
150,000 - 179,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
180,000 - 199,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
200,000 or more: How much?	[]	[]	[]	[]

10. How much did you invest in your own outlet per year over the period given below?

75 - 79	80-84	85 - 89	90-94	average
[]	[]	[]	[]	[]

11. How much did the company invest in your outlet per year over the period given below?

75 - 79	80-84	85- 89	90-94	average
[]	[]	[]	[]	[]

12. How many employees work in the outlet?.....

13. Does the company inspect the outlet?

[] No [] Yes How often?.....
Do you think this is [] Too much [] Too little [] About right

14. Do you think the company/franchisor does enough to promote the product/service?

☐ Yes ☐ No Why?.....

15. Are there any other outlets of the same chain in your area?

☐ No ☐ Yes Within ☐ walking distance
 ☐ 10-15 minutes reach (by car/ bus/train)
 ☐ 20-30 minutes reach (by car/ bus/train)
 ☐ 40-60 minutes reach (by car/ bus/train)
 ☐ more than one hour reach (by car/ bus/train)

16. How far from yours is the closest outlet of the same chain?

☐ Walking distance ☐ 1/2 mile ☐ 1 mile ☐ 2 miles ☐ 5 miles ☐ more than 5 miles

17. Are there any other outlets of a competing chain in your area?

☐ No ☐ Yes Within ☐ walking distance
 ☐ 10-15 minutes reach (by car/ bus/train)
 ☐ 20-30 minutes reach (by car/ bus/train)
 ☐ 40-60 minutes reach (by car/ bus/train)
 ☐ more than one hour reach (by car/ bus/train)

18. How far from yours is the closest outlet of a competing chain?

☐ Walking distance ☐ 1/2 mile ☐ 1 mile ☐ 2 miles ☐ 5 miles ☐ more than 5 miles

19. How far from your outlet is the closest head-office of your company/franchisor?

..... miles

20. What is the address of the head-office of your company/franchisor?

.....

1

10. How much did you invest in your own outlet per year over the period given below?

75 - 79	80-84	85- 89	90-94	average
[]	[]	[]	[]	[]

11. How much did the company invest in your outlet per year over the period given below?

75 - 79	80-84	85 - 89	90-94	average
[]	[]	[]	[]	[]

12. How many employees work in the outlet?.....

13. Does the company inspect the outlet?

☐ No ☐ Yes How often?.....
Do you think this is ☐ Too much ☐ Too little ☐ About right

14. Do you think the company/franchisor does enough to promote the product/service?

☐ Yes ☐ No Why?.....

15. Are there any other outlets of the same chain in your area?

☐ No ☐ Yes Within ☐ walking distance
 ☐ 10-15 minutes reach (by car/ bus/train)
 ☐ 20-30 minutes reach (by car/ bus/train)
 ☐ 40-60 minutes reach (by car/ bus/train)
 ☐ more than one hour reach (by car/ bus/train)

16. How far from yours is the closest outlet of the same chain?

☐ Walking distance ☐ 1/2 mile ☐ 1 mile ☐ 2 miles ☐ 5 miles ☐ more than 5 miles

17. Are there any other outlets of a competing chain in your area?

☐ No ☐ Yes Within ☐ walking distance
 ☐ 10-15 minutes reach (by car/ bus/train)
 ☐ 20-30 minutes reach (by car/ bus/train)
 ☐ 40-60 minutes reach (by car/ bus/train)
 ☐ more than one hour reach (by car/ bus/train)

18. How far from yours is the closest outlet of a competing chain?

☐ Walking distance ☐ 1/2 mile ☐ 1 mile ☐ 2 miles ☐ 5 miles ☐ more than 5 miles

19. How far from your outlet is the closest head-office of your company/franchisor?

..... miles

20. What is the address of the head-office of your company/franchisor?

.....

b

4. An Empirical Study on Contractual Heterogeneity within the Firm: The “Vertical Integration-Incentive Contracts” Mix

4.1. Introduction

Referring to the empirical literature on contractual heterogeneity within firms, Shepard (1993) remarks: “In the absence of outlet specific data, studies test for a relationship between the proportion of outlets operated under some contractual form and some aggregate characteristics. The theory invoked by these studies, however, makes no predictions about proportions. Indeed, in the absence of important heterogeneity across outlets, the theory predicts that only one contract type would be observed,” (p.59). Even relying on outlet-specific data, however, Shepard’s work, like most literature, predicts that outlet heterogeneity leads to heterogeneity in contracts.

Tackling the same problem Lafontaine (1992) argues that existing empirical work on franchising examining the way in which franchisors mix company-owned and franchised outlets cannot explain contract mixing, “with homogeneous outlets the models all lead to chains that are fully franchised or fully-company owned, not to a mixture of contracts,” (p.268). Moreover, she argues, “theoretical models themselves do not really address the issue of contract mixing but rather concentrate on the

determinants of the share parameter,” (p.264). Lafontaine’s findings go beyond the restrictive analysis of the terms of the contract by showing that risk, moral hazard and franchisor’s need for capital are better able to explain the extent of adoption of franchising than the share parameter. However, like all the other contributors to this literature within an agency framework, she does not look at all at the agent’s choice⁷².

In what follows we intend to extend the analysis to the behaviour of this party of the agency relationship, little addressed by the existing literature. The aim of the analysis presented in this chapter is to test some hypotheses explaining the adoption of different contractual arrangements between the principal and the agent deriving from the theoretical work presented in the first part of this study, in which it was concluded that the adoption of franchise contracts and vertical integration within the same firm (namely, Partial Vertical Integration, PVI) could be explained by two main factors: asymmetric information and uncertainty.

The information asymmetry affecting the agency relationship between the upstream firm and the downstream unit was assumed to be twofold. The agency relationship is characterised by the presence of hidden action due to the fact that the principal upstream cannot observe the action of the agent downstream, i.e., there is a potential moral hazard problem. This moral hazard problem becomes even more stringent when

⁷²This shortcoming of existing research on franchising has been stressed also by the business literature. Dant (1995) remarked that despite the frenetic growth pattern registered by franchising, many essential questions about this contract still remain virtually unexplored from an empirical perspective. “For instance, the motivational incentives that prompt individuals into becoming franchisees is still a poorly understood phenomenon since much of the theoretical development within franchising literature has adopted the viewpoint of franchisors,” (p.10).

there is uncertainty over the state of demand for the final product, so that in the case of a bad performance, the principal cannot tell whether the bad outcome was due to lack of effort on the agent's side or to poor demand.

This vertical relationship is also affected by hidden information due to the heterogeneity of potential agents on the market. If the labour market is characterised by the presence of agents who differ in their ability/productivity levels, and this information is hidden from the upstream principal, the contract mixing, i.e., the contemporaneous adoption of franchise contracts and company-ownership represents a 'truth-telling' separating equilibrium solution which enables the principal to overcome the potential adverse selection problem by generating a self selection process of the potential agents.

There has recently been a growing interest in franchising, which has led to a number of empirical papers investigating the firm's organisational forms within an agency framework. However, curiously, these empirical papers look only at the principal's choice, omitting the study of agents' behaviour, thus implicitly assuming that such behaviour will be dictated by, and therefore will perfectly conform to, the principal's decision. The work we are about to present intends to fill this gap in the literature. We pursue this avenue by seeking verification of some new hypotheses we suggested above by comparing and econometrically testing them against the established theories.

We intend to show that the contract mixing (PVI) outcome is the result of the choice of both decision makers, i.e., both the principal offering the contract and the agent accepting it. Therefore the final outcome of this game, represented by a separating

equilibrium, is determined by the design of two different contracts, which will generate a correct self-revelation mechanism of the agent and enable the principal to overcome both moral hazard and adverse selection, while allowing the agent to maximise expected utility.

The main novelty of this study rests on both the explanation proposed of contractual mixing as being determined, among other factors, by agents' characteristics⁷³, and on the data used. The data, collected by survey, combines information on both outlets, agents, and contractual characteristics at outlet level.

The analysis proceeds as follows: section 4.2 sets out the main hypotheses to be tested, comparing and contrasting them to the existing literature. Section 4.3 then presents two alternative models which will be used to test these different hypotheses. Finally, section 4.4 reports the results of the estimations.

⁷³ As a matter of clarification, it is worth remarking that the explanation we propose to contract mixing, namely, among other reasons, labour market heterogeneity, does not imply that the contracts offered by the principal will be tailored to the individual characteristics of each single agent. We expect, instead, that heterogeneity on the agents' market will induce the principal to offer heterogeneous contracts (two in our case), each of them standard in its characterisation, i.e., for all the agents that choose that typology. More specifically, we hypothesise inter-contract uniformity (see Bhattacharyya and Lafontaine, 1995, for a wide discussion of lack of contract terms customisation. See also Dnes, 1992a, Lafontaine, 1992, and Sen, 1993). Our hypotheses predict that a self selection process on the agents will bring about a separating equilibrium characterised by each agent choosing one of the standard types of contracts offered to him, exactly the one the principal designed for that type.

4.2. The Main Hypotheses

In what follows we are going to summarise the main hypotheses deriving from the existing theory on the franchise-vertical integration mix⁷⁴ and compare them with the hypotheses proposed here.

As illustrated in the first chapter of this study, the standard answers provided by the literature, and tested by most empirical work, point at several factors as explaining contractual heterogeneity within the firm: risk sharing, information asymmetry, location and monitoring costs, and capital market imperfections. These explanations are not mutually exclusive; on the contrary, some of them hold true only if combined. However, contrary to what is generally observed (see chapter 2 above for a discussion of this point), they explain contractual heterogeneity as deriving from outlets heterogeneity.

Below we summarise the predictions of these hypotheses and briefly review the hypotheses proposed by this study.

Risk sharing. The delegation of downstream operation via a franchise contract involves the shift of the risk of the operation from the principal to the agent. Therefore, it involves a trade-off between risk-insurance and incentives (Martin, 1988, Norton, 1988, Brickley, Dark and Weisbach, 1991, Lafontaine, 1992). This

⁷⁴ Note, however, that some of the hypotheses formulated in the literature derive more explicitly from the literature on franchise contract rather than contract mixing.

hypothesis predicts that the higher the risk involved in the operation, the lower will be the percentage of the company-owned outlets. In other words, it is assumed that the principal will try to shift the risk of the operation to an independent agent. However, as already noted in the literature, if the principal and the agent share the same information (or lack of it) on the potential market, such argument would be persuasive only if the principal were more risk averse than the agent, which seems to be counterfactual. Indeed, if we assume that the principal is risk neutral and the agent is risk averse, as seems to be the more plausible case, this hypothesis leads to the prediction of complete vertical integration of the chain. Conversely, according to our hypothesis, since the integration/delegation choice is a trade off between insurance and incentives, we believe that in the case of a risk neutral principal and a risk averse agent, the higher the risk the more expensive, in terms of forgone profits, will it be for the principal to provide incentives to the agent, i.e., make use of franchising. Therefore, we expect that higher risk will lead to a higher probability of company ownership.

Information asymmetry (double sided hidden action).

First consider *The agent's hidden action*. This is due to the fact that the agent's behaviour cannot be freely observed by the principal. Moreover, this behaviour cannot be inferred by the outlet's performance because of the presence of a random element in the demand (Mathewson and Winter, 1985), thus creating an incentive to shirk on the agent's side. Hence, the importance of the agent's effort in the downstream operation is a key variable in the contractual decision. Most empirical works

concentrate on the franchisee's moral hazard problem. As Brickley and Dark, 1987, and Brickley, Dark and Weisbach, 1991, point out, since the managers of the company-owned outlets do not bear the full cost of shirking and perquisite taking, they will have a stronger incentive to engage in this behaviour than franchisees. Accordingly, we hypothesise that the moral hazard problem will be more stringent in the case of company operated outlets than in the franchised outlets because of the incentives created by the franchise contract. The franchisee, being the last claimant of the profits, will bear a large part of the consequences of his behaviour. Moreover, the franchisee has a stronger commitment to the business, due to the fact that he makes a (sunk) financial investment⁷⁵. Opportunistic behaviour may lead to its loss if the franchise is withdrawn. Williamson (1985) considers ex-post bonding aspects of hostages but also urges for more attention to be given to their ex-ante screening properties. The latter is the target of this work. According to our model, the contract can be designed in such a way as to control for the franchisee's misbehaviour, while this is not the case for the manager of a company operated outlet.

Now consider *the principal's hidden action*. Some researchers found evidence of the existence of franchisor's moral hazard (Rubin, 1978, Lal, 1990, Lafontaine, 1992). These works note that trademark expenditures are among the most important contributions of the franchisor and, the more important the trademark is to the success of the chain, the more vulnerable are the franchisees to a potential franchisor's

⁷⁵ For a theoretical model where franchisees' sunk costs are shown to be used as an incentive-compatibility device, and rule out agents' opportunistic behaviour see Dnes (1992b).

misbehaviour. However, as we discussed above, it is reasonable to suppose that since opportunistic behaviour of the franchisor would certainly affect his reputation, and therefore the probability of finding agents willing to take up a franchise in his chain, this would not be rational in a repeated game. This is especially so in a chain with a good brand name. In fact, even if this problem does exist, from the results of our survey we observed that it is present in only a very small number of cases. Such cases are represented by new/small chains, i.e., where the brand name is not very valuable, and therefore, as stated by the literature, would not be such a stringent problem for the franchisees⁷⁶. This argument would hold true also in the case when the franchisor's opportunistic behaviour is represented by the attempt to dismiss and buy back the most profitable outlets from the franchisees, taking advantage of the sunk investment realised by the franchisee. However, an investigation conducted by Dnes (1992b) discovered that in UK formal termination is unusual. The franchisors investigated by this study had terminated less than 0.003 of their agreements over 10 years, (p.488)⁷⁷. From our survey we obtained analogous findings (see previous chapter).

⁷⁶ The importance of the reputation for a franchisor is also proved by the fact that many franchisors have formed associations (e.g. The British Franchise Association) guaranteeing that their members respect certain standards and follow certain rules. The main aim of these associations is for the members to tell themselves apart from unethical companies, thereby signalling their type, and providing a kind of guarantee against misbehaviour, to potential franchisees. In this respect, we believe, implicit contracts can substitute for the voids left by explicit contracts. A market sanction can make an implicit contract self-enforcing.

⁷⁷ A possible explanation for the relative lower degree of the principal moral hazard problem in UK with respect to US could be the relatively stronger impact of reputation effects in a smaller market such as UK with respect to US. Alternatively, it could be ascribed to some structural differences which would be of extreme interest to investigate in further research.

Location and monitoring costs. According to the discussion above concerning the incentive to shirk on the agent's side, most empirical literature (inter alia Brickley and Dark, 1987, Norton, 1988, Lafontaine, 1992, Scott, 1995), explains the heterogeneity of contracts by the heterogeneity of the outlets characteristics. The results obtained by these papers show that the larger the distance between the outlet and the branch headquarters, the higher will be the costs of monitoring the behaviour of the agents; therefore this will induce the principal to resort to a larger adoption of franchise contracts in order to provide more incentives downstream. However, following this argument, in the case of homogeneous⁷⁸ outlets we should observe homogeneous contracts, which is not what appears to happen in reality. As mentioned above, we intend to propose a new set of hypotheses according to which the location and distance variables do not bear a large explanatory role of contractual heterogeneity.

Capital market imperfections. A final, and traditional explanation for franchising, mostly invalidated by empirical studies, but still found significant in some cases (Lafontaine, 1992), looks at franchising as a way for the principal to face a binding financial constraint. According to this hypothesis, franchisees are seen as an inexpensive source of capital. This idea, though, seems at odds with the risk sharing argument as described above (see Rubin, 1978).

⁷⁸By homogeneity in this context we mean standardisation. Very frequently these outlets present the same characteristics in terms of size, type of location, refurbishment and lay-out of the products. As Michael, 1996, remarked, "...adaptations to the local market are prohibited by the requirements of standardisation," (p.57).

Information asymmetry (hidden information). As we illustrated above, a different hypothesis we propose in this paper relates to agents heterogeneity. That is, we hypothesised that in the presence of heterogeneity on the managerial labour market the principal wants to assign the downstream operation to the best skilled workers but he cannot observe the agents' type. Therefore, we argue that a firm can offer different contracts to compel heterogeneous potential agents to self-select according to their abilities, which resulted from the solution of the model in part I. Following this argument we intend to test this hypothesis according to which the higher skilled workers will prefer a franchise contract which makes them the last claimants of the profits. However, at the same time these types (who know they are more productive and therefore have a higher reservation utility) will be more costly to the principal, who will have to pay them also a risk premium⁷⁹. On the other hand, the low skilled workers will prefer a full insurance (management) contract. In other words, according to our prediction, PVI will be a first best choice for the principal (with respect to the trade off between forgone profits and better performance⁸⁰ given by the solution of the moral hazard and adverse selection problems), and for the agents, who will thereby maximise their expected utility⁸¹. This first best organisational choice will therefore

⁷⁹ As mentioned above we are assuming that the principal is risk neutral and the agents are risk averse.

⁸⁰ A smaller share of a larger cake might be better than an entire, smaller, cake.

⁸¹ The idea of franchising contracts being adopted as a managerial screening device was already considered by Norton (1988). However, his empirical estimates do not properly explore this hypothesis. That is, Norton argues that as a firm tries to expand rapidly, it is costly for it to find talented, non-shirking, managers (p.213), hence, franchise is a contractual form that economises on managerial and selection costs. Therefore, he states that the positive relationship he found between the growth (in sales) of the establishment and the adoption of franchise proves that the latter is an efficient form of

be mainly due to the alignment of the principal's and the agent's objective functions. Indeed, as Fama and Jensen (1983a, 1983b) remarked, in order for delegation to promote organisational efficiency, the right to make decisions must be properly aligned with the profits that result from those decisions, i.e., residual claims. In the framework of this analysis, the franchisee makes decisions regarding the downstream operation, and bears the residual claims from these decisions⁸². At the same time, since these decisions depend on the franchisee's human capital, it is necessary, for the franchisor, to select the people with the right skills. It is our prediction that the contract design will accomplish at the same time two main tasks: 1. generate incentive compatibility, and 2. work as a screening device by implementing a self-revelation mechanism of the potential agents. Therefore, when incentives are aligned in a principal-agent game, a Nash equilibrium can be reached with the players choosing their first best action, which will now coincide.

To sum up we are going to test whether the contractual heterogeneity is a result of outlets' heterogeneity, or if, conversely, as we hypothesised, it is driven by the agent's

managers selection. Unlike Norton, in this paper we investigate the existence in itself of such a screening process, rather than its (supposed) consequences.

⁸²Franchisees can actually be regarded as 'semi-independent' entrepreneurs because of the many analogies between the activities of the two. Consistent with our hypotheses, the human capital embedded in potential entrepreneurs has been found significant on the entrepreneurial choice by a very recent empirical study (Cressy, 1996), analysing debt rationing on business start-ups. In this paper, which studies debt rationing on entrepreneurship by means of a large dataset of UK business start-ups, Cressy shows that firms self-select for funds on the basis of human capital endowments of proprietors. Furthermore, he finds that "the influence of finance on performance is nil and the correlation between finance and survival vanishes once human capital is controlled for," (p.1254). Human capital, therefore, appears to be the 'true' determinant of survival. If we consider the fact that the franchisee has to make a financial investment to start up his business, the analogy between Cressy's findings and our hypotheses becomes quite clear.

heterogeneity, and by the need to provide these agents with the right incentives and risk insurance.

4.3. The Model Specification

4.3.1. Model 1: The Contractual Choice

The last hypothesis described in section 2, and represented in the first model we are going to test, describes the probability of the contract offered by the principal, and accepted by the agent, being a franchising contract as depending on the agent's and the contract characteristics, as reported in equation (4.1):

$$P(F)_i = \alpha + \beta_1 (Ur)_i + \beta_2 (Age)_i + \beta_3 (Rr)_i + \beta_4 (Ff)_i + \beta_5 (Mh)_i + \varepsilon_i \quad (4.1)$$

where $i=1,2,...46$ refers to the outlet, $P(F)$ is the probability of the outlet being a franchise, ε_i represents the error term. The explanatory variables and their expected relation with the dependent variable are described in what follows.

Ur represents the reservation utility of the agent. We assume that the higher the productivity level of the agent, the higher his reservation utility. To attach a value to

this variable we use the wage earned by the agent in the previous job as a proxy. We expect that the higher the reservation utility of the agent, the higher is the probability that this agent will prefer a franchise contract. Since the agent knows he is skilled, he is confident he can achieve a good performance, which will induce him to prefer a contract that entitles him to the final profits of the operation⁸³. Hence we expect that: $\beta_1 > 0$.

The variable *Age* refers to the age of the agent. Our hypothesis is that the older the agent, the more experienced, or simply self confident, he is⁸⁴. Accordingly, we expect the probability of franchising to be positively related to the age of the agent, i.e., $\beta_2 > 0$.

Rr represents the royalty rate set within the franchise contract. That is, the percentage of the revenues that should be transferred to the principal by the agent, according to the franchise agreement. Therefore $(1 - Rr)$ represents the percentage of the revenues that will be retained by the agent. Our hypothesis is that the higher the royalty rate, the lower is the probability of an agent taking up a franchise contract, as this implies transferring a larger share of the downstream profits to the principal; therefore, we expect that: $\beta_3 < 0$. If this is the case, this result would provide support to our argument that the agent's decision is one of the determinants of the contractual choice. In fact,

⁸³ This contract cannot be mimicked by a performance related pay management contract in that while a franchisee will care for the long-term value of his business, a manager might be just interested in the short-term performance, to which the pay is linked. Anecdotal evidence on this point is reported by Dnes (1992b).

⁸⁴ Age is used as a proxy for experience also throughout the literature on entrepreneurship (see Cressy, 1996, where a concave relationship is hypothesised between human capital and age).

other works (see for example Combs and Castrogiovanni, 1994) assume that franchisors who require large royalties have a higher proportion of franchised units.

Ff is the franchise fee i.e., the one-off payment that the agent makes to the principal at the set up of the franchise contract. This variable has the same interpretation as the initial investment required to the franchisee. Hence, we omit the latter as not to reduce excessively the degrees of freedom of our estimates.

The higher the franchise fee (initial investment) required by the franchisee, the more risky it will be for this agent to accept such a contract⁸⁵. Hence we expect that the probability of franchising decreases with the increasing size of this fee. This variable can be seen as representing the risk aversion of the franchisee. In other words we are predicting that the larger the size of this financial commitment, the higher will be the financial risk involved for the agent, who will therefore be less willing to accept a franchise contract. Unfortunately, this is the only way we have to test the risk argument. The literature has adopted many other measures, which, we believe, cannot be seen as reliable proxies of the risk in that most of them are a-posteriori, hence endogenous, measures. Such is, for example, the case of Martin, 1988, and Norton, 1988, who make use of the variation in detrended sales per outlet. Moreover, we cannot tell whether this variance is due to stochastic elements of the demand or to the agent's behaviour.

⁸⁵The franchisees generally borrow the funds necessary to make this initial payment from banks. Therefore, following the point made by Cressy, 1996, we might envisage that behind the provision of financial capital, which was found in the past to be an explanatory variable for franchising, there could actually be an even stronger explanatory power attached to the human capital than we assumed so far.

Lafontaine, 1992, adopts a measure of risk represented by the average proportion of discontinued outlets in the sector. However, a sectoral measure might not be representative for each franchise in that sector⁸⁶. As Lafontaine and Slade (1995) put it: “unfortunately data that measure outlet risk are virtually non existent,” (p. 9).

Analogously to the royalty rate, the franchise fee is expected to have a negative influence on the probability of franchising.

Similar to our argument, Brickley, Dark and Weisbach, 1991, consider the initial investment as a proxy for risk. They assume that if the coefficient has a negative sign, this would provide support to the risk sharing hypothesis. If, conversely, this coefficient is positive, this would favour the capital constraint hypothesis (Martin, 1988). In that study the former hypothesis is preferred to the latter.

According to our hypothesis we expect the probability of franchising to decrease with the increasing size of the franchise fee in that, if this capital requirement is very high, it might be a disincentive for the agents to take up a franchise, since these agents are risk averse.

Conversely, according to the capital shortage hypothesis the principal is more likely to franchise a higher proportion of its outlets when there is a high initial capital requirement.

⁸⁶ The proportion of franchised outlets discontinued by McDonald's can not be a reliable signal for somebody considering taking up a franchise in a small and little known fast-food chain.

Most recent work has not found evidence supporting the capital constraint hypothesis. Nevertheless, some authors (Lafontaine, 1992), still argue for the relevance of the financial motive in the choice of franchising⁸⁷.

According to the capital shortage hypothesis: $\beta_4 > 0$, while the risk aversion argument predicts: $\beta_4 < 0$.

In order to investigate the moral hazard problem (represented in the model by the variable *Mh*), we assume that the higher the value added downstream (at outlet level), the stronger the moral hazard problem. This implies that when such moral hazard problem is more stringent, the contract offered to the agent will have to provide a higher level of wage to the manager (efficiency wage⁸⁸), and a lower level of royalty to be paid by the franchisee, in order to satisfy at the same time the participation, incentive compatibility and self selection constraints. Unfortunately data on value

⁸⁷One way to test whether the financial constraint is binding on the principal or, conversely, on the agent, could have been to test whether there is a smaller probability of observing a franchise contract when the franchisor participates to the initial investment in the franchised outlet, as the capital shortage hypothesis would suggest, or whether the reverse is true. However, this proved not to be viable in that from the information gathered by our survey, no one case resulted where the franchisor participated in the initial investment. In unison with Klein (1980), we argue that the decision of the franchisor not to participate in this initial investment is not dictated by a binding financial constraint but rather by the disciplinary role performed on the agent by his financial irrevocable commitment. According to Klein, the franchisor can impose a capital loss on the franchisee up to the amount of the initial non-salvageable investment. "Hence, a form of collateral to deter cheating is created," (p.359). A cost penalty for unsatisfactory performance by the franchisee is thereby created. Analogously, Dnes (1992b) argues that the initial fee, coupled with the trade-mark equipment and designs, local goodwill, and many other unaccounted factors, represent sunk costs that act on the franchisee as an explicit hostage with bonding characteristics. See also footnote 85 above, for an additional suggestion as to why the franchisor's capital constraint hypothesis has given rise to contradictory findings, and thoughts.

⁸⁸ On the existence of efficiency wages in company-owned outlets see Krueger, 1991.

added at outlet level are not available, therefore, we resort to the adoption of a measure of labour intensity, as done in the literature. Norton (1988), and Michael (1996), adopt as a proxy the ratio employees/sales; Scott (1995), adopts the capital/labour ratio, since the agent is the one who must oversee the provision of labour. In our model we resort to the same proxy used by Norton (1988), and Michael (1996). In this model we predict that the more important the agent's effort, the higher will be the probability of a (high incentive powered) franchise contract being offered by the principal, i.e., the probability of observing a franchise contract increases as the labour intensity of the downstream operation rises: $\beta_5 > 0$

Some additional relevant variables are then tested at a following stage. They are not included in the main model to economise on the number of degrees of freedom of the estimates. These variables are described below.

Brand is a variable that represents the number of years the company has been in operation. It can be used as a proxy for brand name value. The number of years in business is a proxy adopted by Lafontaine (1992) as one of the measures of the franchisor's input to test for the franchisor's moral hazard hypothesis. Moreover, she adopts this variable also to measure the franchisor's capital constraint, "The more established a firm is, the easier its access to capital should be," (p.274). These two interpretations, argues Lafontaine, are indistinguishable empirically since their effect on the dependent variable is the same, i.e., negative. Our hypothesis is that the older the company, hence, the more valuable the brand name, the higher the expected profits for a potential franchisee; therefore we expect this variable to affect positively the

probability of franchising, $\gamma_1 > 0$. Moreover, the older the company, i.e., the more valuable the brand name, the smaller will be the risk shifted to the franchisee, which reinforces our expectation of a positive effect of this variable on franchising.

RP stands for Recommended Price. This is similar to Resale Price Maintenance (RPM). However, as mentioned above, the price recommendation cannot be identified with the latter for legal reasons. In the previous chapter we identified some cases where the franchisors adopt at the same time these two forms of vertical restraints.

This is included in the estimates by means of a dummy variable taking value 1 in the case of a price recommendation from the franchisor to the franchisee and zero otherwise.

The idea is that if a potential agent has the power to fix the price for the final product, he will have a higher incentive to take on a franchise, hence it should be: $\gamma_2 < 0$.

According to Lafontaine and Slade (1995), the delegation of price decision downstream is generally accompanied by higher prices at franchised outlets, which they explain with tacit collusion motives.

4.3.2. Model Specification

The model presented above is a binary choice model where the contractual choice depends on a set of variables which represent both the individual's and the contract's characteristics. The aim of model 4.1 is, therefore, to investigate the (principal's and agent's) contractual choice so as to establish an empirical link between selection probabilities associated with each alternative and the utility associated with each alternative. Our choice set is restricted to two contractual modes, hence, the decision variable is of a binary type: Franchise or Company-ownership.

We assume the existence of a hierarchical relationship between the two choices, in other words, every individual is assumed to be able to choose one of three different alternatives:

1. becoming a franchisee, 2. becoming a manager of a company-owned outlet, 3. accepting an outside option. Our sample includes the first two alternatives 1 and 2. The outside option, case 3, can be represented by their reservation utility variable, which, in this model, will be smaller or equal to the utility coming from options 1 and 2, and, therefore, foregone (because regarded as inferior) by the individual, (see Hensher and Johnson, 1981, p.82).

Following the hierarchical structure of this model, which derives from the assumption of the existence of a self selection process on the agents' side, based on their human capital, we assume the decision structure to be dependent on the individual's

characteristics⁸⁹. In other words, we expect that the agents who have a lower reservation utility, i.e., who are less productive, will decide to take on a management contract, while those agents who are more self-confident and efficient, and who have a higher reservation utility level, will more likely prefer a franchise contract.

Some of the explanatory variables are alternative specific, namely, the contract characteristics refer to each contractual option. While some of these characteristics are invariant, as for the royalty rate and the franchise fee for all franchise contracts within the same chain, such is not the case for the wage paid to the agent by the management contract which, apart from being alternative specific, will be endogenous to the model, and cannot, therefore, be included in the estimated equation⁹⁰.

The behavioural interpretation is that the particular contractual attributes (royalty rate and franchise fee) exert a pure shift effect on choice, hence, *ceteris paribus*, 'highly

⁸⁹ On discrete choice modelling see Hensher and Johnson, 1981.

⁹⁰ However, some evidence found by recent related empirical work seems to compare favourably with our hypothesis concerning the wage variable. Michael (1996) finds that wages have a significant negative effect on franchising as an organisation share within industries. The wage variable adopted in this study is measured as the average wage per employee in each industry (given by the ratio of total industry payroll to total number of employees). According to our hypothesis, the agent's choice about being a manager or a franchisee is dictated by his reservation utility and the way it compares to the wage and the franchise contract terms (royalty rate and franchise fee). Since we assume that agents who choose a franchise contract have a higher reservation utility, we would expect them to accept a management (fixed wage) contract if this were to offer them a high enough wage. Therefore, analogously to Michael, we would expect a smaller adoption of franchising in those industries (companies) where a high wage is offered. Similarly, according to our predictions, when the wage offered to the agent is relatively low, the better skilled agents would rather be franchisees (entrepreneurs). Indeed, the literature on entrepreneurship assumes that expected utility from entrepreneurship exceeds the expected utility coming from a fixed wage deriving from being an employee (see Blanchflower and Oswald, 1993). Cressy, 1996, makes analogous assumptions, however, he regards the "exercise of skills" as yielding utility to the individual, unlike our theoretical model, which underpins this analysis, where we regard this "exercise of skills" as an effort on the agent's side, which, therefore, yields disutility.

productive' agents will have a higher preference for a particular alternative⁹¹ (franchise contracts) in the choice set. In other words, individuals with different productivity levels and, therefore, different levels of reservation utility, value potential incomes (the expected profits accruing from franchising and the fixed wage of the management contract) differently. In this analysis, then, these attributes enter the utility function of the agents in the same way, the difference stands in the way these attributes are valued by the agent, i.e., they are weighted differently⁹².

Estimating the effect of agents' individual characteristics and of the contract characteristics on the agents' contractual choice requires the adoption of a procedure that accommodates the discrete nature of the observed outcome. Since this outcome can be either a franchise or a management contract, the dependent variable can be defined as the probability of the agent choosing a franchise contract, that is:

$P[Y=1]$ if the contract observed is franchising $P[F]$

$P[Y=0]$ if the contract observed is management, i.e., in the case the outlet is company-owned.

⁹¹ This follows from the hypotheses we have been making in this study, consistent with very recent findings on the entrepreneurial decision, (see Cressy, 1996). In the framework of our model, these weights may be represented by the variables P_h and P_f which enter the expected utility functions of the agents.

⁹² One additional positive shift on the expected utility accruing from the franchise option, might be exerted by the fact that it involves a proven product/brand name. This might encourage 'potential entrepreneurs' into choosing a franchise instead of the 'going alone' option.

This model is of a ‘discrete choice’ type, where our dependent variable represents a probability value, i.e., lies in the [0,1] interval, which makes the adoption of OLS inappropriate. Therefore, we perform our empirical analysis by means of the Maximum Likelihood estimator in a probit specification⁹³.

4.3.3. Model 2. The Standard Hypotheses

The alternative model, presented in equation (4.2), intends to test whether the contractual heterogeneity is a result of outlets’ heterogeneity, or if, conversely, as we hypothesised, it is driven by the agent’s heterogeneity, and by the need to provide these agents with the right incentives.

$$P(F)_i = \alpha + \beta_1(Dist)_i + \beta_2(Size)_i + \beta_3(Loc)_i + \varepsilon_i \quad (4.2)$$

Where the dependent variable is the same as in model 4.1. In what follows we report the description of the independent variables and the expected effect on the probability of adopting the franchise contract as deriving from the standard literature hypotheses.

⁹³ The question of whether to use a normal or a logistic distribution in our case is not very relevant in that these two distribution tend to provide similar results, (see Greene, 1993, p. 638).

The variable *Dist* (Distance), reports the distance between the outlet and the company's head office. It is generally used in the literature as a proxy for monitoring costs⁹⁴. One of the main arguments of this literature is that the further away the outlet from the headquarters, the higher the costs to monitor the outlet, therefore, the higher the probability this outlet will be offered as a franchise. (see inter alia Brickley and Dark, 1987; Minkler, 1990). The higher the distance between the outlet and the head office of the company, the higher the monitoring costs, therefore the higher the probability of franchising, hence it should be $\beta_1 > 0$.

Size represents the size of the outlet in square feet, weighted by the average size of the outlets of the chain they pertain to. This variable is a proxy used to take into account the moral hazard problem, which is assumed to become more stringent the larger the size of the outlet, according to the assumption that larger outlets are more demanding to manage (Lafontaine, 1992, p.273). Different proxies have been used by the literature to take into account the outlet's size, e.g., average sales (Norton, 1988, Martin, 1988, Lafontaine, 1992); initial investment required (Brickley and Dark, 1987, Scott, 1995). However, these proxies capture also other factors like management efficiency in the former case and financial risk in the latter. Hence, we decided to

⁹⁴ The monitoring difficulty is generally measured by means of different proxies:

1. Distance from monitoring headquarters (Brickley and Dark, 1987; Minkler, 1990);
2. Type of location: urban-rural area (Rubin 1978, Brickley and Dark, 1987, Norton, 1988);
3. The inverse of the outlet density (Minkler, 1990; Lafontaine, 1995).

resort to a physical measure⁹⁵, consistent with Lafontaine, 1995, who uses the number of seats in a fast food outlet.

However, while according to the theoretical prediction of these authors an increased size is expected to be associated with more separation, their findings showed that larger size is generally associated with more company-ownership.

“Establishment size may also be a relevant market parameter. Fama and Jensen (1983a, 1983b) note that activities with substantial economies of scale generally entail greater gains from specialisation and separation of investment from management. Thus, larger size would seem to discourage franchising,” (Norton, 1988, p.203).

According to the prediction of the theory, we would expect that the larger the outlet, the higher the probability of franchising, i.e., $\beta_2 > 0$. According to the above argument put forth by Fama and Jensen and reported by Norton though, the reverse should be the case, i.e., $\beta_2 < 0$. Hence, this relationship is ambiguous a-priori.

The variable *Loc* reports the type of location of the outlet. As mentioned for the distance variable, some part of the literature on contract mixing identifies franchise contracts as a response to monitoring problems encountered in remote and dispersed locations, thereby explaining the existence of PVI by variations in these monitoring

⁹⁵ We made use of the data on square feet of each outlet, corrected as described above, and normalised by the industry average to correct for sectoral differences.

costs (Brickley and Dark, 1987; Martin, 1988; Brickley, Dark and Weisbach, 1991). According to these authors the location of an outlet is extremely important in that some outlets, like, for example, those located along a motorway, having a clientele of non repeat customers, present a stronger moral hazard and free-riding problem. Following this hypothesis then, we should expect that remote locations will be franchised, while concentrated locations should be company-owned, (see Rubin, 1978).

To test this hypothesis we constructed a dummy variable of the following typology:

$$Loc = \begin{cases} 1 & \text{in the case of non repeat customers} \\ 0 & \text{in the case of repeat customers} \end{cases}$$

The case of non repeat customers⁹⁶ is the case of outlets located along motorways or in big town centres. The case of repeat customers then, refers to outlets located in rural and small urban areas.

The sign of this relationship is not clear-cut. Actually, if there is a non-repeat type of clientele, the moral hazard problem becomes larger, therefore the proportion of franchised outlets should increase, i.e., $\beta_3 > 0$.

⁹⁶ This variable differs from the one adopted by Brickley and Dark, 1987, who separate out the two types of clientele according to the type of product, e.g., hotels and fast food are considered to serve a non-repeat type of clientele, while retailing and services companies are believed to have a repeat customer group.

However, if $\beta_3 < 0$ this could be explained by the fact that the easier the access to an outlet or, the lower the monitoring costs, as is the case along a motorway or in big town centres, the smaller is the probability of franchising.

This equation, again, will be estimated as a probit model. We intend to test model (4.1) versus model (4.2) in order to test our hypotheses versus the standard literature hypotheses. If model (4.1) fits the data better, this result would support the adverse selection and moral hazard stories, regardless to the outlet heterogeneity. In other words, while according to the existing literature (Brickley and Dark, 1987; Brickley, Dark and Weisbach, 1991; etc.) the distance from the principal, the size of the outlet and other outlet specific variables increase the probability of franchising, our model would present a completely different explanation, that is: the adoption of heterogeneous contracts is driven by incentive and insurance motives on the agents' side, regardless of the distance, the size, the location, and the type of customers of each outlet.

The data adopted to test the two models presented above derives from our survey, see previous chapter for a detailed description. In Table below we report the summary statistics.

Table 5-1 Summary Statistics

Variable	Mean	Std Deviation	Minimum	Maximum
<i>Y</i>	0.7391	0.44396	0	1
<i>Ur</i>	18.521	10.4360	0	60
<i>Age</i>	34.565	7.49341	22	47
<i>Rr</i>	0.0691	0.06764	0	0.2
<i>Ff</i>	15279.35	17457.76	3300	120000
<i>Mh</i>	0.0710	0.12851	0.00067	0.6667
<i>Brand</i>	13.869	5.09295	8	25
<i>RP</i>	0.4782	0.50504	0	1
<i>Dist</i>	117.2	83.591	5	250
<i>Size</i>	1339.9	1670.3	50	8000
<i>Loc</i>	0.47826	0.505	0	1

4.4. The Results

The results obtained from the estimation of the probit models 4.1 and 4.2, described above, are reported in Table 4-2 and Table 4-3.

Table 4-2 Probit results of the estimation of model 4.1

Variables							
	<i>Costant</i>	<i>Ur</i>	<i>Age</i>	<i>Rr</i>	<i>Fj</i>	<i>Mh</i>	<i>Brand</i> <i>RP</i>
Coeff	-9.011	0.2928	0.2559	-7.8250	-0.0005	0.15041	
t-stat	-3.060**	3.308**	3.511**	-1.124	-3.944**	1.687 ⁺	
Std Error	2.944	0.0885	0.0729	6.3025	0.0001	0.8160	
LR test (all slope coefficient $\beta=0$) 37.678**							
Coeff	-9.1943	0.37001	0.30418	-9.4713	-0.00008	-0.1273	
t-stat	-2.097*	1.967*	2.358*	-1.29	-2.00*	-1.406	
Std Error	4.383	0.188	0.129	7.3421	0.00004	0.09	
LR test (all slope coefficient $\beta=0$) 37.234**							
Coeff	-8.266	0.273	0.216	-6.927	-0.00005	-1.4375	
t-stat	-2.727**	2.628**	2.534**	-1.18	-2.871**	-1.943*	
Std Error	3.031	0.104	0.085	5.8720	0.00001	0.739	
LR test (all slope coefficient $\beta=0$) 38.084**							

Significance levels: ** =0.01, * =0.05, ⁺ =0.10.

The above three sets of results, which have been obtained after correcting for an heteroscedasticity problem⁹⁷, are quite similar⁹⁸. They confirm the hypothesis proposed by this study that a mixed organisational form represents a separating equilibrium by implementing a self-selection mechanism within a heterogeneous managerial labour market. This is confirmed by the fact that the probability of an outlet being a franchise increases with the age and the reservation utility of the agent, that is, with his experience and productivity.

The result obtained by Lafontaine (1992), contrary to her prediction on the variable 'brand', i.e., the number of years in operation of the franchisor, indicates that older - more established- companies make a larger use of franchise contracts than younger ones. She comments that "this goes against one's intuition which is to expect franchising to be especially beneficial to young start-up firms with limited resources," (p.279). Conversely, this result makes perfect sense in the light of the hypotheses we proposed in this study. That is, the fact that a company is more established on the market exerts a positive shift on the expected probability of success of the potential franchisees, thus attracting more potential agents to participate to this contract. This argument, coupled with the negative correlation found between the franchise fee and the probability of franchising revealed by our results, confirms that the financial

⁹⁷ For further details on probit regressions with Huber standard errors see the STATA manual.

⁹⁸ They are slightly worse when we include the brand variable, suggesting there is some correlation between the age of a company and the contractual and managerial typology, represented by the independent variables. In the appendix we report the correlation matrix.

constraint is binding for the agents, and not for the principal, unlike Lafontaine's hypothesis.

Our results compare favourably with the findings of most research on entrepreneurship, and, in particular, with those obtained by Cressy (1996). In that paper also, it was found that age was an extremely important individual variable. That, unlike the general definition of human capital adopted by labour economics literature that regards the level of education of the individual as the primary factor, this variable did not have any explanatory power. In some estimations performed in this study but did not report here, we adopted a variable measuring the education qualification of the individuals. We discarded it as it was non significant. Furthermore, "sector specific experience" was not always found significant in Cressy's study. Analogously, from the results of our survey, the respondents declared in most of the cases not to have any specific previous experience, however, the franchisor in most cases provided a training course. This leads us to believe that sector-specific 'capital' does not necessarily identify with 'human capital'⁹⁹. Apparently the particular knowledge of a certain operation is not regarded by franchisors as a 'human capital asset', so that they provide it to their franchisees.

The franchise fee, as predicted, has a negative impact on the franchising choice because of the financial risk this involves¹⁰⁰. Contrary to findings by Norton (1988),

⁹⁹Analogous findings were obtained by our survey, see qualitative analysis presented in the previous chapter.

¹⁰⁰ Case study evidence supports these findings. Dnes (1992a) reports that empirical results support the idea that there is a screening role for these investments, (p.7).

Martin (1988) and Lafontaine (1992), whose results support the notion that risk has a positive effect on the adoption of franchising (!), our findings seem to provide evidence to support the assumption that the agent is the more risk averse party in the agency relationship and that the financial (capital) constraint is binding for the agent, and not for the principal. These results imply, according to our hypotheses, that human rather than financial capital is the most attractive characteristic of franchising.

The main worry about these findings concerns the fact that the royalty rate does not present a coefficient significantly different from zero. Apparently, this would suggest rather than the royalty rate, that the franchise fee is the major disincentive for the agents to take up a franchise. In other words, a financial constraint on the agents' side, or, as we assumed, the higher risk involved by a larger sunk investment has a stronger effect on the contractual decision than the expected revenues.

The moral hazard variable, significant at 10%, confirms that there will be a higher adoption of franchise contracts where the downstream input, i.e., the agent's effort, has a stronger effect on performance.

The variable brand presents the wrong sign though its coefficient does not significantly differ from zero. This can be explained by the fact that this variable does not change among the outlets pertaining to the same chain. Actually, it would be more appropriate to consider it with firm level rather than outlet level data.

Finally, these empirical results support the idea that an agent would be more willing to take up a franchise when he has the freedom to set the price of the final product. This

finding favours the assumption that additional vertical restraints of the form of resale price maintenance, coupled with franchising, can be used by the principal upstream to appropriate any rents¹⁰¹ that might be left downstream, and, would limit even further the inter-brand competition. Since we did not have data on the price set at outlet level it was not possible to test Lafontaine and Slade (1995) hypothesis of downstream tacit collusion at franchised outlets.

We then estimated the alternative model deriving from the standard explanations suggested by the literature, as described by equation 4.2. Two different versions of this model were specified, i.e., we estimated it under a linear and a partially logarithmic specification.

As can be clearly seen from the results reported in Table 5-2, this model is not able to explain the contract mixing under any of the two specifications. Both of them actually fail the LR test on the joint significance of the coefficients: $\beta=0$ ¹⁰².

¹⁰¹ On the existence of rents downstream see Kauffman and Lafontaine, 1994.

¹⁰² The above model was tested for heteroschedasticity and, unlike the previous model estimation, this one resulted not to be affected by such problem.

Table 4-3 Probit results of the estimation of model 4.2 under a linear and a partially logarithmic specification

Variables					
	<i>Costant</i>	<i>Dist</i>	<i>Size</i>	<i>Loc</i>	<i>Log(Size)</i>
Coeff	0.525	0.0003	-0.00009	0.445	
t-stat	1.750	0.397	-0.772	1.075	
Std Error	0.300	0.0001	0.0008	0.414	
LR test (all slope coefficient $\beta=0$) 1.968					
Coeff	0.452			0.4498	-0.00013
t-stat	1.541			1.061	-0.184
Std Error	0.29334			0.424	0.00073
LR test (all slope coefficient $\beta=0$) 1.675					

From the results reported above it can be concluded that physical heterogeneity of the outlet is not able to provide an explanation for contractual heterogeneity¹⁰³.

As a last step of our analysis then we carried out a non-nested test of the two models. That is, we tested model 4.1 versus model 4.2. We performed this test as suggested by Davidson and MacKinnon (1993)¹⁰⁴. This tests that an alternative set of variables z_i is the appropriate one for the structural equation of the probit model. The value of the t-ratio favoured model 4.1 against 4.2 as the correct one at 0.01 significance level.

4.5. Conclusion

In this chapter we investigated heterogeneous organisational forms of the form of a mix of vertical integration and franchising (PVI) in order to test the theoretical propositions deriving by the model presented in the first part of this study. Most of the existing literature has not been able to explain the existence of this contractual

¹⁰³ The fact that the distance variable is not significant might also be due to the fact that the geographical distance in UK is less relevant than it is in US, where the previous investigations have been realised.

¹⁰⁴ This type of non-nested test is based on artificial nesting (see Davidson and MacKinnon, 1993, p.382), where both models are embedded in a more general one against which these two models are tested. In the case of discrete choice models, among which is the one we are studying, this test makes use of a binary response model regression as the general model adopted to compute the non-nested tests (for more details see Davidson and MacKinnon, 1993, p.528 and Limdep 7 manual, p.422). We resorted to the adoption of this type of test because of the low number of observations of our sample. In fact, trying to make use of a nested test created problems to the estimation of the general model due to the low number of degrees of freedom.

heterogeneity in the absence of outlet heterogeneity. We attempted this task by testing a model that explains the adoption of such organisational structure as due to a trade off between risk-insurance and incentives in the presence of uncertainty and asymmetric information. This information asymmetry, of the type of both hidden action and hidden information, invests the principal-agent relationship in such a way as to make this 'hybrid' organisational arrangement the first best for the principal by creating the right incentives downstream and generating a self selection process of the agents. In other words, contract mixing implements the solution of the potential moral hazard and adverse selection problems descending from the information asymmetry in the presence of uncertainty. At the same time it is optimal for the agents who will choose the contract, designed for their type, which maximises their expected utility. In other words, we hypothesised that contract mixing represents a Nash equilibrium of the principal-agent game in that it implements the alignment of the principal's and the agent's objective functions, thereby representing the first best action for both actors at play.

We tested this model against a different model formulated on the basis of the standard hypotheses derived from the literature. These two alternative explanatory models were estimated by means of data we collected by means of the survey described in the previous chapter, on companies in different sectors adopting 'business-format' franchising accompanied by some degree of vertical integration (PVI) in UK.

The data collected by this survey favour the explanation proposed by this paper against the standard answers provided by the literature. Finally, we confronted the

explanatory power of the two models by means of non-nested hypothesis which gave support to our model.

4.6. Appendix

CORRELATION MATRIX

	pay	age	fee	roy	mh	brand	rpm
pay	1.0000						
age	0.3786*	1.0000					
fee	0.0957*	0.0810*	1.0000				
roy	-0.2627*	-0.1513*	-0.0368*	1.0000			
mh	-0.1581*	-0.1949*	-0.1117*	-0.2029*	1.0000		
brand	-0.1884*	-0.1812*	-0.1633*	0.2410*	0.5782*	1.0000	
rpm	0.0184*	-0.0714*	0.0266*	0.2702*	0.0205*	0.0789*	1.0000

Significance levels: * =0.05,

5. Econometric Investigation of the Extent of Adoption of a 'Contract-Mix' by the Firm

5.1. Introduction

As a further step to check the validity of the theoretical propositions presented by this study to explain the existence of contractual heterogeneity within the firm, we are going to perform some empirical analysis on company-level data.

In the two preceding chapters we studied the validity of the hypotheses deriving from the model proposed in the first part of this study by means of data we collected by means of a survey. These data, as described above, focused on outlet level information. In other words, it mainly consisted of data on agents', contracts', and outlets' characteristics. Although we also gathered information on upstream companies, these were indeed quite limited.

The results obtained by the empirical analyses illustrated so far provided support to the explanations proposed by this work. However, the limited investigation of the company (franchisors') side of this agency relationship realised by the survey, led us to decide to investigate the upstream firms further. Actually, in the qualitative analysis of the survey we remarked that, although we obtained results that sustained our theory, we could not claim their generality in that they were obtained from a very limited

sample. This was sufficiently encouraging, though, to further investigate the issue. In this chapter we are going to present the results obtained by such investigation.

This chapter is organised as follows. The next section gives a short overview of the main explanations proposed by this study to contract heterogeneity and sets out the main hypotheses that are going to be tested in this part of the study. Section 5.3 describes the data set adopted for this empirical analysis, and the characteristics of the sample. The model estimated and its econometric specification are then presented in section 5.4. Section 5.5 illustrates the results we obtained. The conclusion drawn from these results is then presented in the last section.

5.2. *The Specification of the Hypotheses*

As discussed above, company level data are not appropriate to investigate contract heterogeneity, especially when this is explained by ‘within firm’ heterogeneity. Nonetheless, company level data investigation can provide useful additional evidence when carried out in the light of outlet-level investigation results.

Hence, in this part of our empirical investigation we are going to explore the extent of adoption of franchising and vertical integration by the firm (principal upstream). Having proved that this contract mix is mainly determined by ‘human capital’ selection, incentives, and risk sharing issues, we now intend to prove that these

motives still hold true at aggregate level, i.e. that they can explain the propensity towards more vertical integration or delegation at firm level.

First, let us summarise our previous findings in order to characterise the deriving hypotheses for the model we are going to test here.

From the results obtained so far we concluded that the adoption of a contract mix is driven by various factors. Most important, and in this stands our main contribution to the existing research, we showed that the franchisor¹ need to obtain the best skilled labour force to perform his downstream operation leads him to offer a contract that only appeals to 'high-skilled' type agents. Such a contract, we showed, takes the form of a share contract in that we identified the high-types as 'potential entrepreneurs', i.e., these agents would be willing to participate in a contract that transfers to them the residual rights of their activity. This proved to be 'optimal' also for the principal in that the delegation of residual rights to the downstream agent generates 'high-power' incentives. In other words, we concluded that performance downstream is linked to ownership to a much larger extent than it is to the reward. We argued that a performance related pay cannot mimic this contract, i.e., is not able to attain the same outcome.

While this contract is optimal for the principal in that he will obtain a high-skill and highly motivated crew, and is optimal for the agents, who get the opportunity to 'have their own' business at a discounted risk rate, this choice is expensive for both. It is expensive for the principal in that this share contract implies providing a partial risk-insurance to the agent, who generally makes the investment. When this solution to the

incentives-risk sharing trade-off proves too expensive, in terms of foregone profits, the principal will resort to it only partially, i.e., he will retain the ownership of part of the downstream outlets. This implies hiring managers for the company-owned outlets. On the agents' market, at the same time, while 'high-skilled' agents prefer a contract that makes them the residual claimants of their activity, 'low-skilled' agents will not accept such a type of contract in that they would prefer a contract that provides them with a full insurance, i.e., a management contract (Cheung, 1969). This proves less expensive to the principal due to the lower reservation utility of these agents, and to the fact that he does not have to provide them with any insurance premium since these agents are 'normal' employees and do not take any part to the financial investment in the operation. However, the features of this contract are such that, the lack of investment -commitment- by the agent, and the payment of a fixed wage (the same argument holds true also in the presence of bonuses and other forms of performance related pay), do not create strong incentives to deter cheating on the agents' side. This task will be performed by the payment of an efficiency wage, and by the existence of unemployment on the managers' market, which will give rise to a disciplinary device in the form of a lay-off threat in case of shirking (Shapiro and Stiglitz, 1984). Hence, the contemporaneous offer of these two types of contracts by the principal will generate a self selection mechanism on the agents' market, thereby implementing a 'truth-telling' separating equilibrium, which constitutes the (local) optimum of this game. This equilibrium proves to be a Nash equilibrium in the principal-agent game, and proves to be a 'Pareto-optimum' in the sense that it will maximise the expected utility coming to both agents' types from the contracts designed for their group, while

enabling the principal to achieve his first-best in terms of downstream performance.

To sum up, adverse selection, moral hazard and risk insurance issues were the arguments we proposed in order to explain this contract mix choice. Therefore, the extent of adoption of each contract type will be determined by the relative size of the above factors in each chain. Adverse selection and moral hazard issues, widely investigated above, cannot be explored here. This is so in that the former cannot be tested at chain level, while the 'Franchise World Directory' does not provide any information to enable us to build a proxy to investigate the latter. The favourable evidence obtained above on these two arguments though, can allow us to focus the following investigation on the last of the three arguments mentioned above, i.e., 'risk-insurance'. Nonetheless, some of the hypotheses deriving from this argument will have implications in terms of the other two arguments too, as we are going to discuss in the following description of the hypotheses.

Risk sharing and franchisors' capital constraint.

Some part of the empirical research on franchising (inter alia, Oxenfeldt and Kelly, 1969; Martin, 1988; Lafontaine, 1992), suggested that this contract enables the principal to face a binding financial constraint by obtaining capital from the agent - franchisee-. Conversely, we showed here that the financial constraint is binding for the agent. This binding financial constraint on the risk-averse agents could be relieved by a risk-neutral principal by taking part to the initial investment. However, unlike what

the above literature predicts, this doesn't happen. Again, we explained this with 'human capital' selection motives. The discussion is analogous for the franchise fee.

Having assumed the agents to have 'potential-entrepreneurs' characteristics, and to be risk averse, we said that the longer the time a company has been in operation, the more valuable will be its brand name, i.e., the smaller the risk of failure shifted on the franchisee. In contrast, the theory would suggest that the younger the company, the tighter its binding financial constraint (in that it does not have credit on the financial markets), hence, the stronger the need to resort to franchisees' capital. Then, as the company gets established (and gains financial credibility), it will buy back these outlets and its proportion of franchised outlets will decrease over time¹⁰⁵.

However, our hypothesis leads us to predict that the longer has the company been in business, the higher its adoption of franchise.

Contract Terms

The franchise fee, i.e., the upfront fixed payment the franchisee has to make to obtain the franchise, can be interpreted in an analogous way to the initial investment. That is, if our hypothesis of franchisees' binding financial constraint holds true, it will induce a lower proportion of franchised outlets.

The prediction about the royalty rate, i.e., the ongoing share of profits that has to be transferred from the franchisees to the franchisors is less clear-cut. We would expect

¹⁰⁵ However, this could also prove into a franchisor's opportunistic behaviour.

that the higher this rate, the lower the expected profits to the franchisees, therefore, the less willing they would be to participate to the contract. On the other hand, the higher this rate, the higher the expected profits for the principal, hence, the probability that he will offer a franchise rather than a management contract. The relationship between this variable and the contract choice is therefore ambiguous a-priori. A positive relationship would show that the principal has the bargaining power, a negative one would signal that the franchisees have the bargaining power. From the econometric analysis performed on outlet-level data above, we found the effect of this variable on the probability of a franchise contract to be non significantly different from zero. We concluded there that the incentive and risk-sharing motives had a stronger explanatory power in determining the contractual choice than expected profits had for both parties.

5.3. *The Data and the Sample*

The data adopted to perform this last econometric analysis consist of a cross-section of companies operating in several industries. These data were derived from the 'Franchise World Directory',¹⁰⁶.

¹⁰⁶See above for a description of this publication.

The number of chains included in the sample was reduced to 46. This was due to the fact that, as we remarked above, not all the firms listed in the 'Franchise World Directory' provide information on their company. Some of them only list their name and address. Moreover, we had to exclude from our sample those companies that did not require ~~/~~neither a franchise fee ~~/~~nor a royalty rate. More specifically, since this study concentrates on 'business format franchising', we had to exclude all those companies that adopt 'traditional franchising', that is, those companies that derive their mark-up from the sale of the inputs to the franchisees for the downstream operation. Furthermore, after eliminating some companies as described above, we had to further reduce their number to make our sample proportional to the population characteristics in terms of sectoral representation.

Most franchise systems are primarily composed of franchise units. In our sample, whose characteristics are represented in Table 5-1, the average percentage vertically integrated outlets [$1-p(F)$] in a system is only the 18.5%. Since the data for this analysis come from a 'Franchise' publication, it does not include companies that are on one extreme of the contractual spectrum, i.e., completely vertically integrated. That is, while it includes companies that are fully separated (completely franchised), as results from the maximum value that the dependent variable, 'percentage of franchised outlets' [$p(F)$], can take on, this is not the case for the minimum of this variable. This implies that our sample is censored, as we do not observe the values of $p(F)$ below its minimum. In the following section we discuss the implications of this censoring in the observations for the econometric specification of our model.

Table 5-1 Summary statistics

Variable	Mean	Std. Dev.	Skew.	Kurt.	Min	Max	n
<i>p(F)</i>	81.55	22.158	-1.5	4.4	0.157	1.0	46
<i>I</i>	66698	109.1	2.5	8.5	5000	500000	46
<i>Year</i>	13.9	9.042	1.1	3.7	3.0	41	46
<i>Fee</i>	15279.4	17427.76	4.8	28.8	3300	120000	46
<i>Rr</i>	0.0691	0.0676	0.8	2.6	0.00	0.20	46

Legend:

p(F)= percentage of franchised units; *I*= initial investment realised by the franchisee;
Year= number of years in business of a company; *Fee*=franchise fee; *Rr*=royalty rate.

5.4. The Econometric Specification of The Model

The dependent variable $p(F)$ is the percentage of franchised outlets, and the subscript i refers to the company, unlike the previous models where it referred to the outlet.

Having discovered that contracts' heterogeneity at outlet level is determined, above all, by the labour market heterogeneity, in the model reported by equation (5.1) below we look more specifically at the proportion of franchised and company owned outlets.

By means of this model we intend to check whether, overall, this proportion is determined by incentive motives and by the need to insure the agents against risk. Therefore, we look at the percentage of franchised outlets as the dependent variable of our model and see whether our model can provide an explanation for it.

$$p(F)_i = \alpha + \beta_1(I)_i + \beta_2(Year)_i + \beta_3(Fee)_i + \beta_4(Rr)_i + \varepsilon_i \quad (5.1)$$

Risk sharing and franchisors' capital constraint.

If, as suggested by existing empirical work on franchising, this contract enables the principal to face a binding financial constraint by obtaining capital from the franchisee, we would expect the percentage of franchised outlets $p(F)$ to be increasing in the size of the initial investment (I). If, on the contrary, as we suggested, this financial constraint is binding for the agent, then we expect the above relationship to be negative, i.e., $\beta_1 < 0$.

According to the hypothesised 'potential-entrepreneurs' features of the franchisees, and to their risk aversion, we expect that the older the company ($Year$), i.e., the more valuable its brand name, the higher the percentage of franchised outlets of a chain ($\beta_2 > 0$). On the contrary, according to the existing theory, illustrated above, the proportion of franchised outlets should decrease the longer the time of operation of the company.

Contract Terms

Following our hypothesis of franchisees' binding financial constraint, the franchise fee (*Fee*), analogous to the initial investment, is expected to be negatively related to the proportion of franchised outlets, that is, $\beta_3 < 0$.

From what concluded in our 'outlet-level' econometric investigation, we cannot clearly predict the sign of the relationship between the royalty rate (*Rr*) and the percentage of franchised outlets in a chain. If these results were to be expected to be consistent with those obtained above, in other words, if incentive and risk-sharing motives had a much stronger explanatory power in determining the contractual choice than expected profits had for both parties, we would then expect this variable not to be significantly different from zero.

Since our dependent variable $p(F)$ is the percentage of franchised outlets in a company, it is bounded between zero and one. Hence, consistent with methodology adopted by other researchers (Brickley, Dark and Weisbach, 1991; Lafontaine, 1992), we estimate model (5.1) by means of a Maximum Likelihood estimator. Because of the characteristics of censoring of this dependent variable, as mentioned above, a Tobit estimator is adopted. Brickley, Dark and Weisbach (1991) explain that the censoring on the dependent variable is due to the fact that the "true variable", i.e., "desirability of franchising", is unbounded, but our observation of it is bounded by the

extremes of the (0,1) interval. Nevertheless, these authors report obtaining the same results when estimating their model by means of the OLS estimator¹⁰⁷.

Both Brickley, Dark and Weisbach (1991), and Lafontaine, 1992, regard the lower limit of truncation as being “0”. However, since the data adopted by those studies, as well as ours, come from information sources on franchise chains, their samples, as ours, do not include the “0” cases, that is, they do not include entirely ‘vertically integrated’ chains, hence the lower truncation on the observations on the dependent variable cannot be regarded as being zero, but is rather represented by the minimum value $p(F)$ takes on.

5.5. The Results

We estimated model (5.1) by means of both a Maximum Likelihood, Tobit, estimator and by OLS. These estimations gave similar results.

¹⁰⁷Not all empirical works on this issue adopting the same dependent variable (percentage of franchised outlets) adopt this Tobit methodology. Some works make use of OLS (Brickley and Dark, 1987; Scott, 1995), some adopt the Weighted Least Squares (Norton, 1988; Martin, 1988; and Michael, 1995, this last author reports obtaining the same results when adopting OLS).

Table 5-2 Tobit Results

Variable	Coefficient	t-stat (significance level)	Standard Error
<i>Constant</i>	87.240	20.752 (0.000)	4.20
<i>Year</i>	0.547	3.98 (0.000)	0.137
<i>I</i>	-0.10	-4.189 (0.000)	0.025
<i>Fee</i>	-0.000355	-7.385 (0.000)	0.00004
<i>Rr</i>	12.235	0.602 (0.547)	20.317
LR test (all slope coefficient $\beta=0$) 26.052 (0.001)			

Since cross sectional data often suffer from a heteroscedasticity problem, we tested for this hypothesis in the above model. We estimated the same model assuming the presence of heteroscedasticity and then performed a LR test. The calculated value (Chi-square) for this statistic did not allow us to reject the null hypothesis of homoscedasticity¹⁰⁸.

The results obtained from the estimation of model 5.1 are consistent with the hypotheses formulated. The older the company, the higher the percentage of franchised outlets. This is due to a 'reputation effect' that positively affects the willingness to participate to this contract on the part of 'better skilled' agents. The better established the company, the lower would be the risk that such a potential agent (entrepreneur) has to incur. The risk of business failure can therefore be considered as

¹⁰⁸The calculated value for this statistic was 6.73, which lies below the critical value at 0.1 probability of a chi-square (with 4 degrees of freedom), this being 7.79.

decreasing in the 'brand name value', which is strictly increasing in the number of years the company has been in business. Analogously, if we assume that the market can be self-regulatory with respect to franchisor's moral hazard, as we do here, the risk of opportunistic behaviour from the franchisor can be seen as decreasing in the years of the company, thus reinforcing our prediction of a positive relationship between the age of the company and its percentage of franchised outlets. The evidence for this assumption is found in our results. Also Lafontaine (1992), contrary to her expectations, finds this variable to present a positive coefficient. Martin (1988) finds an increasing tendency to adopt franchise by a firm in the long-run. He explains this finding as a solution to monitoring costs (the new units will be more geographically spread hence more difficult to monitor), and risk diversification problems (the principal will try to shift the risk on the franchisee). Both these hypotheses were proved inconsistent in the preceding chapter of this study. We showed there that, first, outlets heterogeneity cannot explain contract heterogeneity, and, second, that the positive relationship found by some authors, between risk and vertical separation is not reliable in that the proxies used to measure risk are all affected by a strong endogeneity problem (see above for a deeper discussion).

Norton (1988), focuses on the growth of 'sales' rather than age of the company in exploring the firm's organisational dynamics (we could not follow this route because of lack of availability of financial data). In his investigation Norton finds a positive effect of 'growth of sales' on 'growth of franchising', which he explains with human and financial capital motives. More specifically, Norton suggests that since it is costly

for the firm to find talented non shirking local managers as it tries to expand rapidly, it will resort to franchise. Although these results are consistent with the hypotheses set out in our study about 'human capital', they diverge on their 'financial capital' implications. Rather than a bundling of human and financial capital, we found so far that human capital selection motives drive the firm's contractual choice, and argued, consistent with Cressy (1996) findings, that the provision of finance requested to the agent downstream can be regarded as an additional constraint set on risk averse agents by a risk neutral principal in order to pursue the same target, i.e., select the 'right agents'. Indeed, the results presented in Table 5-2 show that an increase in the initial investment (I), has a negative impact on the percentage of franchised outlets, thus providing further evidence to the existence of a binding financial constraint on the franchisees, already resulted from our outlet-level empirical study (see previous chapter). Analogous findings on the franchise fee (Fee) strengthen this result.

Last, also the findings on the royalty rate (Rr) obtained in these estimations at company level, prove consistent with our previous findings at outlet level where this variable did not present a coefficient significantly different from zero.

5.6. Conclusion

In this chapter we proceeded in testing the hypotheses proposed by the theoretical model presented in the first part of this study.

While the preceding chapter tested this model by means of outlet level data, the

investigation performed here made use of company level data. Since the source for these data (Franchise World Directory) does not report very detailed information, this restricted the number of hypotheses we could investigate, and limited the size of the sample investigated to 46 companies.

The hypotheses deriving from the analysis presented so far, and tested in this chapter, predicted that the extent of vertical separation (franchise) in a firm, is positively correlated to the age of the firm, i.e., the number of years the firm has been in business. As a firm becomes more established on the market, this reduces the risk shifted on the potential franchisees, thus increasing their willingness to participate to a franchise contract. This resulted from the data adopted by this model, which showed the percentage of franchised outlets to be increasing in the age of the company.

Furthermore, our data furnished evidence on the other main hypothesis tested here, which assumed the existence of a binding financial constraint on the agents rather than on the principal, as some part of the literature predicted. This was shown by the negative relationship found between the initial investment and the extent of adoption of franchise contracts. More evidence on this hypothesis was provided by the variable measuring the franchise fee, which, analogously to the initial investment resulted having a negative impact on the extent of the adoption of franchising. The principal-agent contractual choice did not result to be affected by the royalty rate set by the franchise contract.

6. Concluding Remarks

The remarkable increase in heterogeneous contractual arrangements within the firm, and more particularly, in the adoption of franchise contracts mixed with some degree of vertical integration, Partial Vertical Integration, PVI, is arguably one of the most important organisational innovations of the last decades. The large growth in the adoption of mixed organisational structures has posed a theoretical puzzle that 'the theory of the firm' has so far failed to explain. In fact, although this has lately given rise to a large amount of research, still no unitary framework has been provided to explain this phenomenon.

Existing research, as was showed in the literature overview presented in the first chapter of this study, has been unable to formally address this question by failing to provide a thorough explanation to PVI. Instead, most analyses have been limited to a description of some particular features of the problem, failing to address the general issue. Such is the case of double sided moral hazard models, 'monitoring costs hypothesis', signalling models, transaction costs approach, and other theories described above, that mostly draw on the idea of a misalignment of incentives between the upstream and downstream operation.

Along these lines, these theories mostly argue that contractual heterogeneity within the firm can be explained as due to heterogeneous characteristics of the units downstream. Such correspondence, however, is not what is generally observed in

reality. In fact, where this heterogeneity of outlets is missing, these models predict that the firm will be wholly vertically integrated or disintegrated, which is clearly at odds with empirical observation.

Another recurrent explanation provided by the literature views the provision of capital by the downstream agents as one of the main features that appeal the upstream principal and induce him to introduce partial vertical separation within his firm.

This theory, however, is seriously flawed in its risk-sharing implications, i.e., it would only make sense if the principal were to be more risk averse than the agent which, again, seems to be at odds with the real case. Nevertheless, most works have either been promoting this hypothesis, without finding evidence to support it, or they abstracted from it. In fact, by assuming the agents to be risk averse and the principal to be risk neutral, as would be a closer representation of the real case, still, these models would -wrongly- predict a full vertical integration outcome.

In this study, we were able to provide an answer to the existence of mixed organisational structures that received strong empirical support.

In the first part we suggested some new hypotheses mostly drawing on the human capital implications of the firm's organisational choice. Within a principal agent framework, characterised by the presence of both uncertainty and information asymmetries, of the hidden action and hidden information type, we showed that in the presence of agents heterogeneity on the market for managerial talents moral hazard and adverse selection can explain contract mixing even in the case of homogeneous

outlets. In particular, the results of our analysis led us to conclude that the manufacturer will optimally design a menu of contracts that not only causes agents to self-select (to solve the adverse selection problem), but also provides them with the appropriate incentives to supply the maximum effort in their activity, to overcome the moral hazard problem.

Hence, we showed that contract mixing represents a 'truth-telling' separating equilibrium which enables the principal to overcome problems related to hidden action, hidden information and uncertainty downstream. Such organisational structure represents the 'optimal choice' for the principal (upstream) in the trade-off between incentives and risk sharing. At the same time, it proves to be optimal for the heterogeneous agents (downstream) by providing them with their maximum level of expected utility.

This result is of extreme relevance for a number of reasons. First, it does not need to assume outlets heterogeneity in order to explain contract heterogeneity, as the existing literature so far has been doing. Second, it obtains this result in a context characterised by risk-averse agents and risk neutral principal. Such result had not been obtained by the literature so far. Some recent research stepped away from the previous fallacies of the capital constraint argument, see Lafontaine and Bhattacharya, 1995, but still, could not obtain this result in such a framework. These authors, in fact, assume both parties to be risk neutral.

Although it might seem at odds with risk-sharing theory to obtain an 'optimal solution' where risk averse agents provide finance, we proved that this can be

explained by the 'entrepreneurial features' of the downstream agents. This has two main implications. First, that these agents are willing to set up an independent business, but franchise is to them an economic alternative in that it reduces the risk the 'independent' option would involve. Second, this financial arrangement has strong human capital implications (Cressy, 1996). In other words, a binding financial constraint on risk-averse agents will induce a self-selection process of these agents according to their skills. This share contract proves then appealing to these agents in that it will generate quasi-rents downstream (Kaufmann and Lafontaine, 1994, Michael and Moore, 1996).

This financial allocation proves then optimal for the principal also because this financial commitment can, to some extent, be regarded as a bond posted by the agents on their future performance. Moreover, this ownership structure determines the structure of the incentives (Grossman and Hart, 1986), and thereby its efficiency, by aligning the interests of the principal upstream and of the agent downstream. However, the high-power incentives coming from the franchise contract, cost the principal the delegation of the downstream ownership, thereby inducing the retention of a minor share of the profits -reduced even further by the need to provide risk-insurance to these agents-. Nevertheless, this is optimal as long as this insurance does not become too costly. Hence, the principal will turn to partial vertical integration. Although vertical integration has the advantage of enabling the firm to keep all downstream returns, it is costly for two main reasons. First, the management contract will appeal to 'low-skilled' agents, and, second, the managers of the company-owned

outlets will have a larger incentive to indulge in opportunistic behaviour. Extracting the right effort from the agent could in certain circumstances, be even more costly than delegating part of the ownership. We showed that the payment of efficiency wages to these agents (Krueger, 1991), and the contemporaneous presence of unemployment on the market for these agents (a' la Shapiro Stiglitz, 1984), make the 'lay-off' threat for these agents work as a disciplinary device.

To sum up, when the market is characterised by the presence of differently 'skilled' agents, the principal will implement a menu of contracts (franchising and management) for both incentive and self-selection purposes.

PVI is therefore, a sort of hybrid organisational form, lying somewhere in between 'market' and 'hierarchy'. This is especially so in the light of the results obtained here, which showed that PVI is a local 'optimum'. The fact that this hybrid solution does not represent a 'global' optimum suggests that, consistent with empirical observation, when the parameters of the problem change, the firm might revert to one or the other extreme of the organisational spectrum, as the mixed structure might no longer represent an 'optimum'. This result brings us to stress, in unison with other authors (Holmstrom and Milgrom, 1994) that there is not an 'overall' model capable of explaining the firm's organisational choice. Rather different cases have to be analysed independently where different factors shape up this forms. In this study we looked at the case of retailing, which was represented by means of a model characterised by monopolistic competition -as seems to be the case for this market-. The results obtained proved consistent with all the hypotheses proposed by our model.

This discussion proved to have ‘real-world’ validity when empirically investigated. The empirical investigation, presented in the second part of this study, greatly differs from existing empirical research on the topic. This difference mainly stands in the fact that existing research has always limited its study to the principal’s choice, leaving in the shade the contractual decision of the agent, thereby implicitly assuming that this would quietly follow, and conform to, the principal’s choice. Our empirical study showed that this is not the case. It proved that this issue can only be properly investigated with single contract data, which, despite the predicted correspondence between outlets and contract characteristics, is not the route generally followed. In fact, curiously enough, most empirical works on the topic make use of company level or even industry level data. This does not seem appropriate to investigate the issue. The lack of data is certainly one of the main impediments that keeps researchers from attempting this path. Therefore, in order to overcome this problem, we carried out our own survey of UK retailing firms. The data collected in this way enabled us to test a discrete choice model explaining the mix of franchised and company-owned outlets among firms according to the hypotheses suggested by the theory proposed. The hypotheses proposed here enjoyed support by these data.

Unfortunately, these cross-section data did not allow us to test of all the predictions deriving from our model. This however, did not affect the validity of our propositions, which could derive support from results of existing research. Such was the case of our comparative statics results, showing the changes of this organisational structure over the cycle (Stigler, 1951). We also tested some of these hypotheses at company level

on a different data set (Franchise World Directory, 1994). The results confirmed the findings obtained at outlet level.

The findings obtained by this study present interesting policy implications. By showing that in a competitive framework this contract mix is 'socially optimal', we were able to suggest that vertical restraints do not necessarily, and always, hurt consumers. Sometimes, indeed, they can be the most efficient contractual (organisational) form for a firm facing several constraints, i.e., facing different trade-offs in a world where bounded rationality becomes the rule in the presence of uncertainty and information asymmetries. This is especially true when the firm does not enjoy any monopoly power. In such instances, the delegation of downstream property rights may even prove welfare enhancing. To sum up, we showed the reasons why economic agents (principals and agents) wish to enter these contractual arrangements as not being driven by any 'competition restricting' targets. The main policy implication that can be derived from this result is that vertical restraints (franchising), are not 'per se' competition reducing or welfare reducing devices. Sometimes, as in our context, they can even be welfare enhancing.

This leads us to conclude that public policy on vertical restraints should be open to ad hoc assessment, "legality or illegality per se seems unwarranted," (Tirole, 1988, p.186). Task of the economist is then to identify the environment in which a particular form of vertical restraint has no adverse impact on competition, (Seabright, 1996). This study represents an attempt along this way.

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